To: Smith, Darcie[Smith.Darcie@epa.gov]; Walton, Tom[Walton.Tom@epa.gov]
Cc: Weatherhead, Darryl[Weatherhead.Darryl@epa.gov]
From: Diem, Art
Sent: Fri 11/13/2015 1:17:35 PM
Subject: RE: Facility research
CHM056A.pdf
chloroprene rubber production and consumption.xlsx

FYI, regarding worldwide capacity, I've obtained the following resource (pdf attachment) and put together some summary information (XLSX attachment).

Thanks,

Art

- -

Art Diem, Environmental Engineer

USEPA Office of Air Quality Planning and Standards,

Sector Policies and Programs Division, Refining and Chemicals Group

Diem.Art@epa.gov

919-541-1185

From: Smith, Darcie
Sent: Thursday, November 12, 2015 5:40 PM
To: Walton, Tom
Cc: Weatherhead, Darryl; Diem, Art
Subject: Facility research

Hi Tom –

Can you help us with some economic information about a facility? It is the DuPont Pontchartrain Works facility in LaPlace, LA. (Sometimes it is also called the DuPont Pontchartrain Site.) It has a variety of MACT source categories present (e.g., HON, MON, stryene butadiene rubber production) Ex. 5 - Deliberative

Ex. 5 - Deliberative

Ex. 5 - Deliberative

Darcie Smith

U.S. EPA/OAQPS/HEID/ATAG

Mail Drop C539-02

109 TW Alexander Dr.

RTP, NC 27711

(919) 541-2076

To: Novikoff, Joshua[Novikoff.Joshua@epa.gov]
From: Diem, Art
Sent: Mon 9/28/2015 5:28:53 PM
Subject: Denka Resources

Hi Josh,

Thanks for talking with me about the Dupont Pontchartrain facility and its purchase by DENKA.

Ex. 5 - Deliberative

Here's the announcement that DENKA is buying this facility:

http://www.denka.co.jp/eng/news/pdf/20151211_Dupont_Denka_webEng.pdf

A news story:

http://www.plasticsnews.com/article/20141210/NEWS/141219995/end-of-era-for-dupont-chemical-company-to-sell-neoprene-unit

Here's the TRI facility report for DUPONT PONTCHARTRAIN WORKS (see releases tab for Chloroprene releases to air)

http://www.epa.gov/enviro/facts/tri/ef-facilities/#/Release/70069DPNTPHIGHW/DUPONT%20PONTCHARTRAIN%20WORKS

(I would send National Emissions Inventory information http://www3.epa.gov/ttn/chief/eiinformation.html , but that's not as user friendly)

Here's a USAToday information database relating to its report on toxic air pollution near schools, showing the nearest school being in the top percentile of exposure to toxic pollution:

http://content.usatoday.com/news/nation/environment/smokestack/school/38315

Here's the Japan Ministry of Environment page for its Pollutant Release and Transfer Register (PRTR)

https://www.env.go.jp/en/chemi/prtr/prtr.html

Ex. 5 - Deliberative

Thanks,

Art

- -

Art Diem, Environmental Engineer

USEPA Office of Air Quality Planning and Standards,

Sector Policies and Programs Division, Refining and Chemicals Group

Diem.Art@epa.gov

919-541-1185

To: Cook, Rich[Cook.Rich@epa.gov]; Sargeant, Kathryn[sargeant.kathryn@epa.gov]; Harnett, Bill[Harnett.Bill@epa.gov]; Green, Gregory[Green.Gregory@epa.gov]; Hubbell, Bryan[Hubbell.Bryan@epa.gov]; Scheffe, Rich[Scheffe.Rich@epa.gov]; Fox, Tyler[Fox.Tyler@epa.gov]; Houyoux, Marc[Houyoux.Marc@epa.gov]; Strum, Madeleine[Strum.Madeleine@epa.gov]; Smith, Darcie[Smith.Darcie@epa.gov]; Morris, Mark[Morris.Mark@epa.gov]; Palma, Ted[Palma.Ted@epa.gov]
From: Rimer, Kelly
Sent: Thur 9/24/2015 11:29:28 AM
Subject: FW: NATA Status Update: Materials in prep for tomorrow's meeting with Janet
NATA Status 9_24_15.pptx

Materials for today's NATA briefing with Janet

From: South, Peter
Sent: Wednesday, September 23, 2015 5:23 PM
To: Alston, Lala; Koerber, Mike; OAQPS WOPS; OAR Briefings; Sanders, Maria; Walker, Jean
Cc: Keating, Martha; Mozingo, Kristal; Sasser, Erika; Scavo, Kimber; Shepherd, Eloise; Rimer, Kelly; Palma, Ted; Wayland, Richard; Bremer, Kristen
Subject: NATA Status Update: Materials in prep for tomorrow's meeting with Janet

I have attached the briefing slides in prep for tomorrow's meeting with Janet on NATA.

Please call me or Mike Koerber with any questions relating to this information.

Thank you.

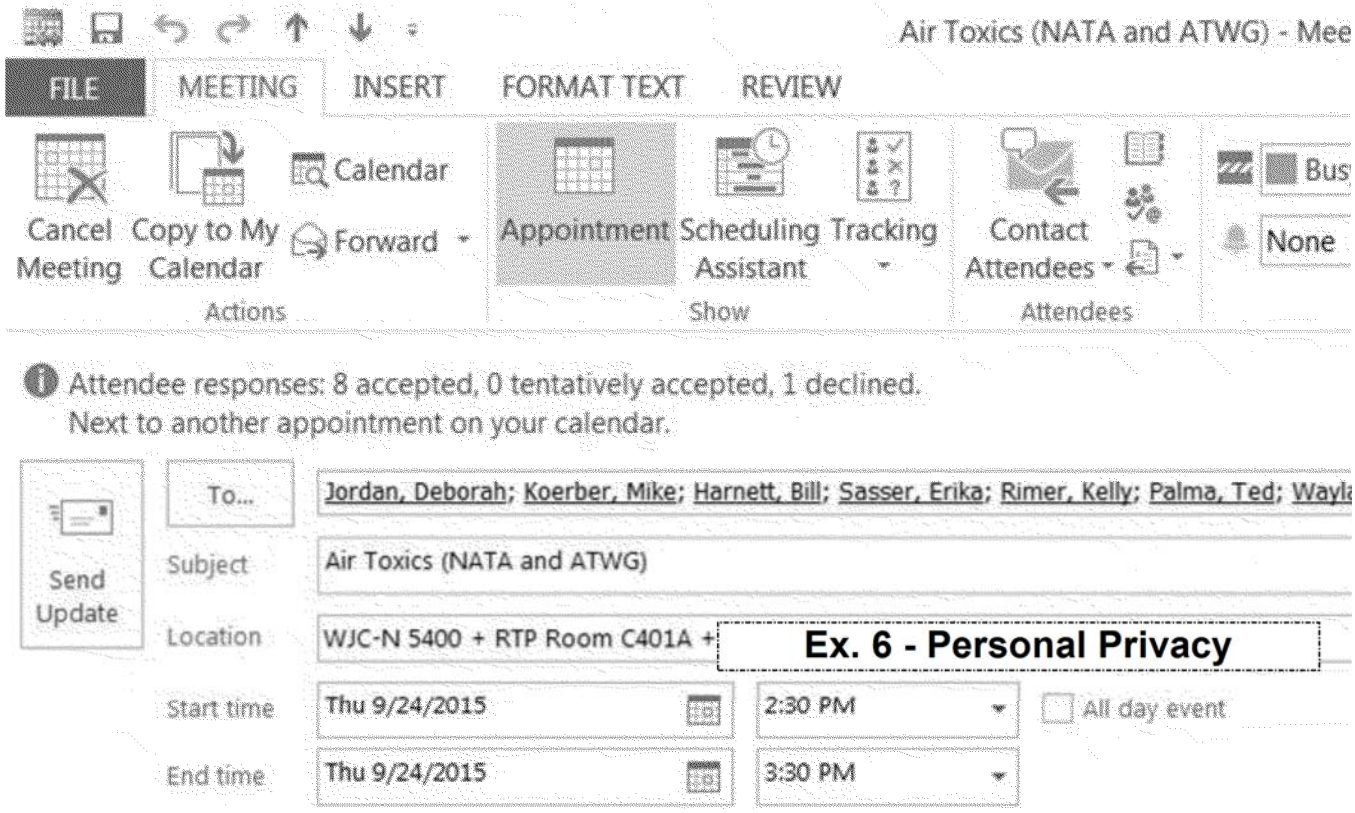
Pete South

OAR/OAQPS/IO

U.S. EPA

office: 919 541-5359

cell: Ex. 6 - Personal Privacy


Air Toxics (NATA and ATWG) - Mee
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None
Attendee responses: 8 accepted, 0 tentatively accepted, 1 declined.
Next to another appointment on your calendar.
Send Update
To...
Jordan, Deborah; Koerber, Mike; Harnett, Bill; Sasser, Erika; Rimer, Kelly; Palma, Ted; Wayl
Subject
Air Toxics (NATA and ATWG)
Location
WJC-N 5400 + RTP Room C401A +
Ex. 6 - Personal Privacy
Start time
Thu 9/24/2015
2:30 PM
All day event
End time
Thu 9/24/2015
3:30 PM
To: McCabe, Janet; Jordan, Debbie; Koerber, Mike; Harnett, Bill; Sasser, Erika; Rimer, Kell
Madeleine; Sargeant, Kathryn; Cook, Rich

From: Jorge Lavastida
Location: Ex. 6 - Personal Privacy RTP-E201-Max50/RTP-Bldg-E
Importance: Normal
Subject: Accepted: NATA Chloroprene Discussion with Denka/ DuPont -
Start Date/Time: Tue 12/15/2015 6:00:00 PM
End Date/Time: Tue 12/15/2015 7:00:00 PM

;

To: Art Diem (Diem.Art@epa.gov)[Diem.Art@epa.gov]
From: Lassiter, Penny
Sent: Thur 11/19/2015 6:29:29 PM
Subject: FW: Follow-up on NATA
LA_Chloroprene.kmz

FYI. Keeping you in the loop on this.

From: Rimer, Kelly
Sent: Thursday, November 19, 2015 12:41 PM
To: Debbie.J.Mulrooney@DuPont.com
Cc: Lassiter, Penny <Lassiter.Penny@epa.gov>; wharton, <D-Alonzo.Wharton@dupont.com>
Subject: Follow-up on NATA

Debbie,

Thank you for joining the call on Tuesday. In this email are several follow-up items related to our discussion.

First, as we discussed, NATA is a complex national screening analysis that estimates risks at the census tract level. The results are based on emissions from all sources that impact a particular tract, including large and small facilities and various types of mobile sources. It is our understanding that you are interested in chloroprene from the La Place facility and replicating the NATA analysis. Since chloroprene dominates the cancer risks from that tract, and we can help you get close to the answer we have in NATA for that tract, but it will not be an exact match.

If you were to conduct a tract-level analysis, here are the five steps you would take: (1) estimate emissions, (2) run a dispersion model to estimate ambient block-level concentrations, (3) aggregate block-level concentrations up to population-weighted census-tract level concentrations, (4) apply a factor to estimate the exposure concentrations, and (5) use the dose-response values to estimate risks and hazards.

As you can see, there are multiple steps, and the other (i.e., non-facility) contributors to the concentrations come into play. Here are some notes to get your facility emissions through the process and obtain a result close to NATA.

1. Use 2011 emissions from the publicly available National Emissions Inventory (NEI). We did confirm the facility's chloroprene emissions, stack parameters, and location coordinates with staff at the facility.

2. Use the Human Exposure Model, version 3 (HEM3, which contains AERMOD) or AERMOD itself to obtain ambient concentrations around the facility. The HEM model can be found here: http://www2.epa.gov/fera/risk-assessment-and-modeling-human-exposure-model-hem

If you install and run HEM3, you will also need to download the census files and the meteorological data files for the area. We can help answer questions about running HEM if you have any.

3. Take the modeled ambient block-level concentrations and multiply them by the block population. Then sum all of the population-weighted ambient concentrations in the tract. Divide that sum by the total tract population to get the population-weighted census tract-level ambient concentration. Remember the results we present in NATA are tract-level results, not block-level results.

4. Run the ambient tract-level concentration through HAPEM7 to account for population mobility, etc. HAPEM7 won't be released until NATA is, but the ratio you need to multiply your ambient concentration by is 0.86 for chloroprene. If you want to use the older HAPEM model and run it yourself, you can find HAPEM here: http://www2.epa.gov/fera/human-exposure-modeling-hazardous-air-pollutant-exposure-model-hapem

5. Multiply the exposure concentration by 4.8×10^{-4}. This is the IRIS URE multiplied by a factor of 1.6 to account for the mutagenic mode of action. The application of the 1.6 factor is standard EPA practice for a mutagenic chemical such as chloroprene and is documented in the 2005 Supplemental Cancer Guidelines, which can be found here: http://www2.epa.gov/risk/supplemental-guidance-assessing-susceptibility-early-life-exposure-carcinogens.

If you had multiple carcinogens, you would add the tract-level risks together at this point.

Second, attached is a kmz file that will show you the *ambient* concentrations of chloroprene at census tracts in southern Louisiana. The highest concentration is 1.9 ug/m3. This would give you a cancer risk of approximately 900-in-1 million. However, after applying the exposure factor of 0.86, the tract-level risk is reduced to approximately 800-in-1 million, which is the number presented in NATA. As I indicated during our call, risks are not attributed to any facility. However, facility names are attributed to emissions (emissions are publically available

information), and can be found on data tables and on the map when the emissions layer is turned on.

Third, on the call, Matt mentioned some additional documents related to chloroprene that have been published since the IRIS assessment in 2010. Is it possible for you to provide those citations? We think we know to what documents he was referring, but it would be good to be sure. Also, if you and/or he are interested in having a follow-up call with particular staff in our Office of Research and Development (ORD), let us know and who you would like to be on the call on your end and we will set up a meeting.

Thank you,

Kelly

Kelly Rimer

Leader, Air Toxics Assessment Group

US EPA

Office of Air Quality Planning and Standards

109 TW Alexander Drive

RTP. NC 27709

919-541-5368

To: Mckelvey, Laura[Mckelvey.Laura@epa.gov]
From: Rimer, Kelly
Sent: Tue 11/24/2015 1:23:40 PM
Subject: FW: Briefing Materials for NATA Briefing with Steve Page Tues 11/24
NATA Management briefing for Steve Page 11 24 15.pptx

From: Shepherd, Eloise
Sent: Monday, November 23, 2015 4:24 PM
To: South, Peter <South.Peter@epa.gov>
Cc: Alston, Lala <Alston.Lala@epa.gov>; Sanders, Maria <Sanders.Maria@epa.gov>; Sasser, Erika <Sasser.Erika@epa.gov>; Scavo, Kimber <Scavo.Kimber@epa.gov>; Rimer, Kelly <Rimer.Kelly@epa.gov>; Mozingo, Kristal <Mozingo.Kristal@epa.gov>; Bass, Katherine <Bass.Katherine@epa.gov>
Subject: Briefing Materials for NATA Briefing with Steve Page Tues 11/24

Hi Pete,

Attached are the materials for the 3 p.m. NATA briefing for Steve tomorrow.

Thanks.

Eloise

Eloise Shepherd

U.S. EPA (C504-02)

OAQPS/HEID/IO

RTP, NC 27711

Tel: (919) 541-5507

FAX: (919) 541-0804

To: Gray, David[gray.david@epa.gov]; Millett, John[Millett.John@epa.gov]; Drinkard, Andrea[Drinkard.Andrea@epa.gov]
From: Noonan, Jenny
Sent: Fri 12/11/2015 5:04:29 PM
Subject: FW: News clips from Louisville KY newspaper re: risk levels

From: Keating, Martha
Sent: Friday, December 11, 2015 11:58 AM
To: Noonan, Jenny <Noonan.Jenny@epa.gov>; Bremer, Kristen <Bremer.Kristen@epa.gov>; Rimer, Kelly <Rimer.Kelly@epa.gov>
Cc: Drinkard, Andrea <Drinkard.Andrea@epa.gov>
Subject: News clips from Louisville KY newspaper re: risk levels

CP was previously produced in Louisville KY before operations were consolidated. This page has clips from local paper in reaction to local health study (I didn't buy the full text obviously but you will get the picture from the short free text).

http://pqasb.pqarchiver.com/courier_journal/results.html?st=basic&type=current&QryTxt=chloroprene

Also note – "An EPA fact sheet said symptoms of long-term exposure in workers can include chest pains, giddiness, irritability, dermatitis, hair loss and a weakened immune system."

Martha H. Keating

Policy Advisor

Health and Environmental Impacts Division

Office of Air Quality Planning and Standards (C539-04)

U.S. Environmental Protection Agency

Research Triangle Park, NC 27711

(919) 541-9407

2011 National-scale Air Toxics Assessment

Frequently Asked Questions

General Background Questions

1. What are air toxics and what health effects are caused by exposure to them?
2. What is the National-scale Air Toxics Assessment?
3. How can NATA information be used?
4. How should I NOT use NATA results?
5. Are there any risks from exposure to air toxics that are not covered by NATA?
6. Who is responsible for controlling air toxics?
7. What should I do if I am concerned about air toxics in my area?
8. How does NATA differ from other screening tools used by EPA?
9. How do I know which screening tool to use?

Emissions, Modeling, Methods Questions

1. Which air toxics are included in NATA?
2. What are the steps in the National-scale Air Toxics Assessment?
3. What is CMAQ and how was it used in the 2011 NATA?
4. Why were Alaska, Hawaii, Puerto Rico, the Virgin Islands, and other territories not included in the CMAQ modeling?
5. Why are all the estimates from 2011 and not more recent?
6. Why is EPA using computer modeling techniques instead of actual measurements to estimate concentrations and exposures?
7. What improvements have been made in the 2011 NATA?
8. What kind of changes were made in the 2011 NATA as a result of the review by the States?
9. How did EPA characterize risk from modeled 2011 exposure estimates?
10. How does EPA estimate cancer risk?
11. Why are primary biogenic emissions not included from Alaska, Hawaii, Puerto Rico, and the Virgin Islands?
12. A portion of the estimated risk is due to "background". What is background?
13. A portion of the estimated risk is due to secondary formation, and it varies across the country. What is it?

Risk Background Questions

1. What does "1-in-1 million" cancer risk mean?
2. What does EPA believe constitutes an acceptable level of risk?
3. How were the cancer risk estimates affected by EPA's Guidelines for Carcinogen Risk Assessment (EPA/630/P-03/001F) and Supplemental Guidance for Assessing Susceptibility from Early-Life Exposure to Carcinogens (EPA/630/R-03/003F)?
4. Why did the EPA use the (higher) unit risk estimate (URE) for formaldehyde reported in the Agency's Integrated Risk Information System (IRIS)?
5. Why aren't results for dioxins included?

Results Questions

1. Does the assessment show that the risk is high?
2. What do these estimates mean to me?
3. How accurate is the assessment?
4. How does the cancer risk identified in this assessment compare to a lifetime cancer risk from all causes?
5. Risk data is shown down to the census tract level. Are the results accurate enough to draw conclusions at this scale?
6. Based on this NATA, can EPA determine which areas or populations are at greatest risk from air toxics?
7. How does this assessment of 2011 air toxics data compare to previous national-scale assessments?
8. Has air quality improved?
9. Can NATA be used to evaluate exposures at specific points of interest, e.g., near schools, day care centers, hospitals, etc.?
10. I am able to locate a specific facility location from the map and get a risk at that location. How accurate is that risk value?

11. Why is there risk from biogenic emissions?

Fire Questions
1. How did EPA treat fires in the 2011 NATA?
2. What does NATA show regarding impacts of wildfires, prescribed fires and agricultural burning?
3. What are the uncertainties in risks from emissions from fires?
4. What is being done to reduce air pollution from wildfires and prescribed fires?

Mobile Source Questions
1. How accurate are risk estimates for mobile sources in my census tract?
2. Onroad and nonroad mobile sources are large contributors to overall risk in the 2011 assessment. What is the EPA doing to reduce emissions of mobile source air toxics?
3. Why are only noncancer risks calculated for diesel PM? Isn't there a cancer unit risk available?
4. There has been increased concern about the health effects associated with pollution near roads. What can the 2011 NATA tell us about communities potentially at greater health risk from exposure to near-road pollution?
5. NATA results show significant risks associated with a port in my community. How accurate are the risk estimates associated with ports, and what can be done to reduce these risks.
6. What does the 2011 NATA say about airport risks?

General Background Questions

1: What are air toxics and what health effects are caused by exposure to them?
A: Air toxics, also known as toxic air pollutants or hazardous air pollutants, are those pollutants that cause or may cause cancer or other serious health effects, such as reproductive effects or birth defects, or adverse environmental and ecological effects.

Examples of toxic air pollutants include benzene which is found in gasoline; tetrachloroethylene which is emitted from some dry cleaning facilities; and methylene chloride which is used as a solvent and paint stripper by a number of industries. Section 112 of the Clean Air Act identifies 187 air toxics emitted from stationary and mobile sources and subjects the sources of their emissions to regulations in order to protect public health. Through appropriate rulemaking, the Clean Air Act list may be modified. For more information on the Clean Air Act, see http://www.epa.gov/air/caa/. For more information on air quality, see www.epa.gov/air/basic.html

The EPA has classified many of these substances as "carcinogenic to humans," "likely to be carcinogenic to humans," or "suggestive evidence of carcinogenicity to humans." Air toxics are associated with a wide variety of noncancer adverse health effects that include neurological, cardiovascular, liver, kidney, and respiratory effects as well as effects on the immune and reproductive systems. The seriousness of the harm can range from headaches and nausea to respiratory arrest and death. Severity varies with the amount and length of exposure, the nature of the chemical itself (e.g., how it interacts with various organs and organ systems), and the unique behaviors and sensitivities of individual people. Some chemicals pose particular hazards to people of certain ages or genetic backgrounds.

2: What is the National-scale Air Toxics Assessment?
A: The National-scale Air Toxics Assessment (NATA) is EPA's comprehensive evaluation of air toxics in the United States, based on modeled air quality. EPA developed the NATA as a tool for EPA and State/Local/Tribal Agencies to prioritize air toxics, emission sources, and locations of interest for further study in order to gain a better understanding of risks. NATA is a state-of-the-science screening tool that does not incorporate refined information about emission sources, but rather, uses general information about sources to develop estimates of risks using analytical methods. NATA assessments provide screening-level estimates of the risk of cancer and other serious health effects from breathing (inhaling) air toxics in order to inform both national and more localized efforts to identify and prioritize air toxics, emission source types, and locations that are of greatest potential concern in terms of contribution to population risk. This in turn helps air pollution experts focus limited analytical resources on areas or populations where the potential for health risks are highest. NATA provides a snapshot of the outdoor air quality and the risks to human health that would result if air toxic emission levels remained unchanged. A more detailed explanation of NATA and the methods used may be found in the Technical Support Document.

3: How can NATA information be used?
A: Specifically, EPA uses NATA results to:

- identify pollutants and source categories of greatest concern,
- improve understanding of health risks posed by air toxics,
- help set priorities for the collection of additional information,
- set priorities for improving emission inventories,
- expand and prioritize EPA's air toxics monitoring network,
- support communities in designing their own local assessments,
- enhance targeted risk reduction activities,
- link air toxics to the Criteria Pollutant Program, and
- help inform community and local air toxics programs

4: How should I NOT use NATA results?
A: NATA assessments should not be used for the following:

- as a definitive means to pinpoint specific risk values within a census tract,
- to characterize or compare risks at local levels such as between neighborhoods,
- to characterize or compare risks between states,
- to examine trends from one NATA year to another,
- as the sole basis for developing risk reduction plans or regulations,
- as the sole basis to control specific sources or pollutants, or
- as the sole basis to quantify benefits of reduced air toxic emissions.

It should also be noted that although results are reported at the census tract level, average risk estimates are far more uncertain at this level of spatial resolution than at the county or state level. Even though some of the methods used to conduct NATA are similar to those used in air-related risk assessments conducted under the Clean Air Act mandate (such as residual risk assessments of hazardous air pollutant (HAP) emissions from point sources, or assessments of exposures to criteria pollutants for evaluations of National Ambient Air Quality Standards), NATA fundamentally differs from such assessments in that it is not a refined assessment, and it is not used as the sole source of information leading to regulations or guiding the enforcement of existing rules.

5: Are there any risks from exposure to air toxics that are not covered by NATA?
A: This assessment is focused on characterizing one piece of the air toxics risk picture at a particular point in time. NATA looks at human health impacts from estimated, chronic, inhalation exposure due to outdoor sources of air toxics, assuming the emissions upon which NATA are based remain constant throughout one's lifetime, not today's levels or projected levels. NATA does not include:

- Cancer risks associated with diesel particulate matter, which are likely to be substantial (see question 3 below in the Mobile Sources Section).
- Non-inhalation exposures, such as ingestion and dermal exposures. These additional pathways are especially important for pollutants that persist in the environment and bioaccumulate (e.g., mercury and polychlorinated biphenyls).
- Exposures and risk very near to specific sources or highly-localized hotspot levels, such as some types of occupational or near roadway-related exposures.
- Individual extremes in exposure. All risk estimates are based on exposure estimates for the median individual within each census tract. EPA considers this exposure to be a "typical" exposure for that tract. Some individuals may have substantially higher or lower exposures based on where they live within that tract or spend the majority of their time.
- Emissions from indoor sources of air toxics. For certain air toxics and for certain indoor situations, total long-term human exposures can be significantly influenced and sometimes dominated by exposures from indoor sources.
- Risk estimates for chemicals that do not have adequate dose-response information (e.g., assessment does not quantify cancer risk from diesel PM).

- Impacts of non-routine increases in facility emissions due to, for example, equipment startups, shutdowns, malfunctions, and upsets.
- Assessment of adverse environmental effects, or other welfare effects.

6: **Who is responsible for controlling air toxics?**
A: The responsibility is shared among EPA, state, local and tribal air programs. EPA sets national standards for air toxics emissions. The state, local, tribal programs are responsible for implementing these rules. In addition, some state, local, and tribal programs have their own air toxics rules. Some studies conducted by state, local, and tribal programs can be found here.

7: **What should I do if I am concerned about toxics in my area?**
A: Contact your State, local or Tribal air program. A list of state and local programs is available at:
http://www.4cleanair.org/agencies EXIT Disclaimer

Information on Tribal programs and EPA's Regional Tribal Program coordinators can be found at:
http://www2.epa.gov/tribal

8: **How does NATA differ from the other screening tools used by EPA?**
A: NATA is a national assessment that estimates cancer and noncancer risks from inhalation of air toxics. NATA is intended as a screening tool to help users prioritize pollutants, types of emission sources, and locations of interest for further study. NATA is also incorporated into other Agency screening tools, including EJSCREEN and C-FERST/T-FERST.

The focus of the EJSCREEN screening tool is to assist stakeholders in making informed decisions about potential environmental justice issues by identifying the locations of potentially overburdened and vulnerable populations. EJSCREEN output includes environmental justice indexes that combine demographic variables with a single environmental indicator. The index provides a comparison between areas.

The focus of C-FERST is to provide information and community mapping through an assessment tool that is designed to help assess screening-level exposures and risks. To provide guidance and information that helps inform in decision making with communities, C-FERST provides access to resources that can be used to help communities learn more about their environmental issues and to develop solutions.

9: **How do I know which screening tool to use?**
A: The screening tool you select depends on your main area of interest. Those primarily interested in inhalation risks and pollutant-specific assessment may find NATA to be the best tool. Those interested in how the environmental quality differs by demographics will want to start with EJSCREEN. For communities interested in their specific area with an interest in exploring community strategies to address a specific issues (e.g., brownfield development), CFERST is a good place to start. Users could also use the tools in sequence by identifying communities of interest with EJSCREEN and then using CFERST to take a closer look at that community and using CFERST guides for community assessments and potential solutions.

Emissions, Modeling, Methods Questions

1: **Which air toxics are included in NATA?**
A: The 2011 NATA is a national-level risk assessment based on the emissions of air toxics that produces census-tract level estimates of ambient and exposure concentrations for 180 air toxics, plus diesel PM, which EPA assessed for noncancer effects only. Using the concentration estimates for the 180 air toxics plus diesel PM, NATA estimates cancer risk and noncancer hazard for 138 of these. For 43 air toxics, concentration estimates but no health effects information are available. A list of all air toxics assessed and an indication of what types of results were generated for each can be found in Appendix B of the 2011 NATA Technical Support Document.

The following individual listed air toxics were not included in this assessment because either no emission information was reported for them in 2011 or emission estimates useful for modeling could not be determined reliably from their reported emissions (e.g., radionuclides).

- 2,3,7,8-tetrachlorodibenzo-p-dioxin,
- Other dioxins/furans
- asbestos,
- fine mineral fibers,
- radionuclides,

- DDE
- Diazomethane, and
- Hexamethylphosphoramide.

2: What are the steps in the National-scale Air Toxics Assessment?
A: NATA includes the following four major steps for assessing air toxics across the United States (and also for Puerto Rico and the U.S. Virgin Islands):

1. **Compile a 2011 national emissions inventory of air toxics from outdoor sources.**
   EPA compiled measured or estimated emissions data reported by sources, States, and others. EPA also estimated mobile source and other emissions using models, measurements, and a quality-control process. This compilation of information is called the National Emissions Inventory (NEI). The types of emission sources in the inventory include major stationary sources (e.g., large waste incinerators and factories), area and other sources (e.g., dry cleaners, small manufacturers), and both onroad and nonroad mobile sources (e.g., cars, trucks, and boats). Emissions from fires and biogenic sources are also included. For 2011, EPA used the NEI as the starting point and developed the 2011 NATA inventory which was used as the source of input information for modeling.
2. **Estimate ambient air concentrations based on the 2011 emissions.**
   The 2011 NATA emissions information for all air toxics were used as inputs to the air dispersion model AERMOD (as run in the Human Exposure Model (HEM), and the Community Multi-scale Air Quality (CMAQ) to estimate ambient concentrations. Forty HAP were modeled in CMAQ and all HAP were modeled in AERMOD. The results were then combined using the hybrid approach to take advantage of the strengths of both models. (The Technical Support Document contains lists of the CMAQ HAP and the AERMOD HAP, as well as a description of the hybrid approach.) As part of this modeling exercise, EPA compared estimated ambient concentrations to available ambient air toxics monitoring data to evaluate model performance.
3. **Estimate population exposures.** The estimated ambient concentrations are used as inputs to an exposure model, the Hazardous Air Pollution Exposure Model (HAPEM). Estimating exposure is a key step in determining potential health risk. People move from one location to another, for example from outside to inside. Thus, exposure isn't the same as it would be if people stayed in one location. People also breathe at different rates depending on their activity levels, so the amounts of air they take in vary in time. For these reasons, the average concentration of a pollutant that people breathe, or their exposure concentration, might be higher or lower than the concentration at a fixed location (i.e., ambient concentration).
4. **Characterize potential public health risks due to inhalation of air toxics.**
   Cancer and noncancer health effects were characterized using available information on air toxics health effects, current Agency risk assessment and risk characterization guidelines, and estimated population exposures. This characterization quantifies, as appropriate, potential cumulative risks to public health due to inhalation of air toxics from outdoor emission sources assuming a lifelong exposure to 2011 levels of emissions. It also discusses the uncertainties and limitations of the NATA assessments. More detailed information about these steps can be found in the Technical Support Document.

3: What is CMAQ and how was it used in the 2011 NATA?
A: CMAQ, EPA's Community Multiscale Air Quality Model, is used to conduct urban- to regional-scale simulations of multiple air quality issues. The model provides complete coverage over space and time of the lower 48 United States. CMAQ accounts for key physical and chemical properties that affect how pollutants are transported and react with other pollutants and gases in the atmosphere. A primary use of CMAQ is to predict how emissions of multiple air pollutants, emitted by numerous sources at the same time, affect the concentration of these pollutants across the U.S.

Several features of CMAQ that contribute to its strengths for the 2011 NATA include: conservation of mass (i.e., if some quantity of a pollutant is transported from an area, it is accounted for in the new area); consideration of long-range transport of pollutants; and estimated concentrations of secondarily-formed pollutants (e.g., formaldehyde). In the 2011 NATA, EPA used CMAQ for about 40 pollutants including emissions from point, nonpoint, mobile, and fires.

In addition to the CMAQ model, the dispersion model AERMOD was run for all of the NATA pollutants at all U.S. census tracts, for point, nonpoint, and mobile sources. Dispersion modeling uses mathematical formulations to characterize the atmospheric processes that disperse a pollutant emitted by a source. The resulting ambient concentrations estimated by both CMAQ and AERMOD were then used together, in a hybrid approach, to take advantage of the features of each model. Detailed information on the approach used with CMAQ and AERMOD can be found in the Technical Support Document (section 3).

4. Why were Alaska, Hawaii, Puerto Rico, the Virgin Islands, and other territories not included in the CMAQ modeling?
A: The CMAQ modeling performed for the 2011 NATA used a single domain that covers the entire continental U.S. and large portions of Canada and Mexico. However, this domain does not include Alaska, Hawaii, Puerto Rico, or the Virgin Islands (which is consistent with previous regulatory modeling exercises conducted by EPA). Air quality modeling done for areas outside of the lower 48 states is typically performed by incorporating data that is tailored to the unique weather and terrain that influence these areas. Incorporating this additional data for the NATA air quality modeling would have required significantly more computing resources. However, users can find additional information about air toxics emissions in these areas by using the NATA mapping tool.

5: Why are all the estimates for the year 2011 and not more recent?
A: We used 2011 data because emission inventories from that year were the most complete and up-to-date available. Working with industries and States, we update our air toxics emission inventories every 3 years and are now gathering and compiling 2014 data. The risk estimates assume a lifelong exposure to 2011 levels because calculating projected exposures based on projections to more recent years would be substantially more complex and uncertain.

6: Why is EPA using computer modeling techniques instead of actual measurements to estimate concentrations and exposure?
A: The ability to directly measure ambient air toxics concentrations evenly across the country is currently limited. Such measurements are available for only a subset of air toxics in relatively few locations and for small study populations. Therefore, computer models that can estimate ambient air toxics concentrations and population exposures nationwide are needed to conduct large-scale, comprehensive assessments such as NATA.

Measurement data are used and will continue to be used to evaluate the models to better understand some of the uncertainties in such assessments and to improve modeling tools. For example, in the Section 3.3 of the Technical Support Document, Model Evaluation, there is an explanation of the results of the model-to-monitor comparisons done for the 2011 NATA. In addition, annual statistics for air toxics monitoring data are provided in the NATA Map Application. Air toxics monitoring data can be obtained from the Air Monitoring Archive in Microsoft ACCESS format for historical data years up to 2013 or, from EPA's AQS data mart for the most up-to-date data.

7: What improvements have been made in the 2011 NATA?
A: The following changes were incorporated in the 2011 NATA. Many of the changes adopted in the 2005 NATA were carried over to the 2011 NATA: they are not repeated here.

- Emissions
    - Used 2011 NEI v2 based on updated information.
    - Included wild fires.
    - Biogenic emissions were split out as separate primary emissions category (were included within secondary category in 2005 NATA).
    - More complete inventory for oil and gas emissions resulting from new EPA nonpoint oil and gas estimation tool and state data submittals.
    - Improved spatial allocation of county-level oil and gas emissions
    - Better characterization of airports
    - Over 750 rail yards were included as point sources.
    - The updated model MOVES2014 was used to develop mobile on-road emissions.
    - Commercial marine vessel emissions were better spatially allocated

    - Prescribed burning and agricultural burning emissions were generated using updated models
    - Updated emission factors collected from rule development were used where available.
- Modeling
    - AERMOD was used to model all NATA pollutants emitted from point, nonpoint, and mobile sources for all U.S. Census tracts.
    - CMAQ was used to model about 40 NATA pollutants for the lower 48 states at 12 km grid resolution to capture chemistry and long-range transport. Ran for point, nonpoint, mobile sources, and fires.
    - Ambient concentrations from both models were combined using a hybrid approach.
    - Updated background concentrations based on remote background concentration estimates and used for pollutants not modeled in CMAQ.
- Risk Characterization
    - HAPEM7 was used to estimate exposure concentrations.
    - Dose-response values were updated with latest science (IRIS, CalEPA, ATSDR).
    - Several benchmarks have been updated since the 2005 NATA.
    - New web-based map to display results.

Although EPA is continually refining and updating the assessment methods, it is important to remember that NATA is a screening-level assessment. The intent is to identify hazardous air pollutants resulting in high exposures or census tracts where population exposures may be of concern. These areas could then utilize more refined assessments (e.g., monitoring or site-specific risk assessments), to develop a more thorough understanding of these "hot-spot" exposures.

8: What kind of changes were made in the 2011 NATA as a result of the review by the States?
A: EPA appreciates the time taken by State, local, and tribal air agencies to preview and comment on the preliminary results of this assessment. It is thorough reviews such as these that enable us to continually improve our assessments, thereby increasing the benefit to all users of the results. The 2011 NEI v1 review led to changes by more than 25 agencies which were incorporated in the 2011 NEI v2. We received over 200 sets of comments from nearly 50 State, local, and tribal agencies during review of the risk results based on the 2011 NEI v2. These comments along with review by EPA resulted in over 45,000 revisions to NATA inventories. These comments covered the areas of:

- Facility changes:
    - Removal of facilities (duplicates or closed prior to 2011)
    - Geographic coordinate changes
    - Facility changes
    - Facility NAICS and SCC changes Revisions to stack parameters

- Emission changes:
    - Additions, deletions, and recalculations
    - Changes to chromium speciation, hexavalent chromium percentage
    - Revision of TRI emissions which were based on midpoint of range (for facilities reporting a range estimate to TRI)
    - Removal of estimates based on older, outdated methodology (ethylene oxide sterilizers)

Most of the comments were addressed by making the appropriate changes to the 2011 NEI and NATA inventories, and the final 2011 NATA now reflects these changes. Additional comments focused on methodological and toxicological questions, many of which are addressed or answered in various sections of the NATA webpage.

9. How did EPA characterize risk from the modeled 2011 exposure estimates?
A: To evaluate a chemical's potential to cause cancer and other adverse health effects, EPA examines the adverse effects a particular substance causes (in a "hazard identification"), determines the exposure to the

population (in an "exposure assessment"), and evaluates the specific exposures at which these effects might occur (in a "dose-response assessment"). The evaluation is based on studies of humans, animals, and microorganisms, and is usually published in peer-reviewed scientific journals. In this national-scale assessment, EPA combined information from dose-response assessments with modeled exposure estimates in a "risk characterization" to describe the potential that real-world exposure to air toxics compounds might cause harm. The EPA also examined the uncertainties surrounding the characterization of risk.

10. How does EPA estimate cancer risk?
A: At present, EPA typically assumes a linear relationship between the level of exposure and the lifetime probability of cancer from an air toxics compound. It expresses this dose-response relationship for cancer in terms of a unit risk estimate. The unit risk estimate (URE) is an upper bound estimate of an individual's probability of contracting cancer over a lifetime of exposure to a concentration of one microgram of the pollutant per cubic meter of air. Risks from exposures to concentrations other than one microgram per cubic meter are usually calculated by multiplying the actual concentration to which someone is exposed by the URE. For example, the EPA may determine the URE of a particular air toxics compound to be one in ten thousand per microgram per cubic meter. This means that a person who inhales air containing an average of one microgram per cubic meter for 70 years would have (as an upper bound) one chance in ten thousand (or 0.01 percent) of contracting cancer as a result. The EPA has developed UREs for many substances, and continues to re-examine and update them as knowledge improves. More information on UREs can be found in the EPA's Integrated Risk Information System. The UREs used in this assessment, are included Appendix H of the Technical Support Document.

11: Why are primary biogenic emissions not included from Alaska, Hawaii, Puerto Rico, and the Virgin Islands?
A: Primary biogenic emissions were only modeled using the CMAQ air quality model. Alaska, Hawaii, Puerto Rico, the Virgin Islands, and other territories are not currently included in CMAQ. See the answer to question 4 for more information.

12: A portion of the estimated risk is due to "background". What is background?
A: In NATA, background risk represent the contributions to outdoor air toxics concentrations resulting from natural sources, persistence in the environment of past years' emissions, and long-range transport from distant sources. Background concentrations could be levels of pollutants that would be found in a particular year, even if there had been no recent manmade emissions. The vast majority of risk from the NATA background concentrations is from carbon tetrachloride, a ubiquitous pollutant that has few sources of emissions but is persistent due to its long half-life. Background was estimated as remote concentration estimates from monitoring and emissions.

13. A portion of the estimated risk is due to secondary formation, and it varies across the country. What is secondary formation?
A: Like ozone, some hazardous air pollutants, such as formaldehyde and acetaldehyde are formed through chemical reactions that occur in the atmosphere due to emissions of volatile organic compounds (VOC) and oxides of nitrogen (NOx). Secondary formation was estimated in 2011 NATA using the CMAQ model.

Risk Background Questions

1: What does "1-in-1 million" risk mean?
A: A risk level of 1-in-1 million implies a likelihood that one person, out of one million people that are exposed to the same concentration of the same pollutant, would contract cancer if exposed continuously (24 hours per day) to that specific concentration over 70 years (an assumed lifetime). This risk would be an excess cancer risk that is in addition to any cancer risk borne by a person not exposed to these air toxics.

2: What does EPA believe constitutes an acceptable level of risk?
A: Unlike other pollutants that EPA regulates, air toxics have no universally-applicable, pre-defined risk levels that clearly represent acceptable or unacceptable thresholds. However, EPA has made case-specific determinations and described certain general presumptions that apply to particular regulatory programs. The 1989 Benzene National Emission Standard for Hazardous Air Pollutants (NESHAP) rule set up a two-step, risk-based decision framework for the NESHAP program. This rule and framework are described in more detail in EPA's 1999 Residual Risk Report to Congress. First, the rule sets an upper limit of risk acceptability of about 1-in-10,000 (or 100-in-1 million) lifetime cancer risk for the most exposed individual. In the rule, we explained, "The EPA will generally presume that if the risk to that individual [the Maximum Individual Risk] is no higher than approximately 1 in 10 thousand, that risk level is considered acceptable and EPA then considers the other health and risk factors to complete an overall judgment on acceptability." Second, the rule set a target of protecting the greatest number of persons possible to an individual lifetime risk level no

higher than approximately 1-in-1 million. These determinations called for considering other health and risk factors, including the uncertainty in the risk assessment, in making an overall judgment on risk acceptability.

Unlike cancer risk, there currently is no framework for determining the acceptability of noncancer risks. Aggregate exposures equal to or below a hazard index (HI) of 1.0 derived using target organ specific hazard quotients likely will not result in adverse noncancer health effects over a lifetime of exposure and would ordinarily be considered acceptable. However, an HI greater than 1.0 does not necessarily suggest a likelihood of adverse effects nor does it imply an unacceptable level of effect. Instead, the acceptability of exceedances is evaluated on a case-by-case basis, considering such factors as the confidence level of the underlying health data, the uncertainties , the slope of the dose-response curve (if known), the magnitude of the exceedances, and the numbers or types of people exposed at various levels above the RfC.

3: How were the cancer risk estimates affected by EPA's Guidelines for Carcinogen Risk Assessment (EPA/630/P-03/001F) and Supplemental Guidance for Assessing Susceptibility from Early-Life Exposure to Carcinogens (EPA/630/R-03/003F)?

A: NATA is consistent with the 2005 revised cancer guidelines and the Supplemental Guidance that makes recommendations with regard to estimating cancer risks to children. The recommendations concerning children's risk have been implemented for the following HAPs: acrylamide, benzidine, chloroprene, coke oven emissions, ethyl carbamate, methylene chloride, nitrosodimethylamine, and PAHs by applying a risk factor of 1.6 to account for the increase in lifetime cancer risk due to childhood exposures. This was done because these HAPs have been shown to have a mutagenic mode of action and because there is no chemical-specific data to show that there are differences between children and adults in the way they respond to exposure to these agents.

In contrast, vinyl chloride does have chemical-specific data available regarding children's exposure and risk. These data were used in the derivation of the unit risk estimate (URE) (see the IRIS website for a more thorough explanation). Therefore, the URE for vinyl chloride that is used in the 2011 NATA and is presented in Appendix H of the Technical Support Document, already reflects the risk due to childhood exposures, and no further adjustment is necessary.

For trichloroethylene, a carcinogen with a mutagenic mode of action, the age dependent adjustment factor for the URE only applies to the portion of the slope factor reflecting risk of kidney cancer. For full lifetime exposure to a constant level of trichloroethylene, the URE was adjusted by a factor of 1.12.

A brief explanation of the adjustments to risk follows: The Supplemental Guidance recommends that risks to children be adjusted for carcinogenic chemicals acting through a mutagenic and linear mode of action (i.e., chemicals that cause cancer by damaging genes). Where available data for the chemical are adequate, they should be used to develop age-specific potency values (e.g., vinyl chloride). Where available data do not support a chemical-specific evaluation of differences between adults and children, the Supplemental Guidance recommends the use of the following default adjustment factors for early-life exposures: increase the carcinogenic potency by 10-fold for children up to 2 years old, and 3-fold for children from 2 to 15 years old. These adjustments have the aggregate effect of increasing by about 60 percent (i.e., a factor of 1.6), the estimated risk for a 70-year (lifetime) constant inhalation exposure.

It is important to keep in mind that EPA recommends that the default adjustments be made only for carcinogens (1) acting through a mutagenic mode of action, (2) for which a linear dose response has been assigned, and (3) for which data to evaluate adult and juvenile differences are not available. **The default adjustments are not recommended for carcinogens whose mode of action is unknown.** EPA will determine as part of the IRIS assessment process which substances meet these criteria, and future national-scale assessments will reflect adjustments for those substances.

4: Why did EPA use the higher potency or unit risk estimate (URE) for formaldehyde reported in the Agency's Integrated Risk Information System (IRIS)?

A: For this 2011 NATA assessment, consistent with the 2005 NATA, we used the existing IRIS URE for formaldehyde. That URE is 1.3 x 10-5 per $\mu g/m^3$. The EPA's Office of Research and Development (ORD) believes there is sufficient published, peer-reviewed research to support the use of the existing IRIS URE. EPA is currently updating the IRIS file for formaldehyde to consider new science published in the peer-reviewed and epidemiologic literature. This updated IRIS assessment is not expected to be completed in the release of the 2011 NATA. Therefore, for this assessment and in the near-term, EPA is using the existing IRIS URE for formaldehyde. In previous NATA analyses (1999 and 2002), EPA utilized a cancer potency for inhalation exposure to formaldehyde derived from modeling sponsored by what was then the Chemical Industry Institute for Toxicology (CIIT), now called the Hamner Institutes for Health Sciences.

5: Why aren't results for dioxin included?
A: We did not evaluate exposure and risk related to dioxins in the 2011 NATA because we did not evaluate the completeness or accuracy of the State, Local, and Tribal (S/L/T) agency data for dioxins. The most significant exposure route for dioxin is ingestion, not inhalation, so dioxin's relative contribution to NATA's inhalation risk estimates likely would not be large.

Results Questions

1: Does the assessment show that the risk is high?
A: Based on the results of the 2011 NATA and other studies, millions of people live in areas where air toxics may pose potential health concerns. While air quality continues to improve, more needs to be done to meet the Clean Air Act's requirements to reduce the potential exposure and risk from these chemicals.

EPA will continue to develop air toxic regulations as well as cost-effective pollution prevention and other control options to address indoor and urban pollutant sources that significantly contribute to risk.

The 2011 NATA estimates most individuals' risks to be between 1-in-1 million and 100-in-1 million, although the estimates for a small number of localized areas are higher than 100-in-1 million. Individuals and communities may be concerned about this. It is important to remember, however, that NATA was not designed as a definitive means to pinpoint specific risk values at local levels. The results are best used as a tool to prioritize pollutants, emissions sources and locations of interest for further investigation. It should be noted that the risks estimated by NATA do not consider ingestion exposure or indoor sources of air toxics. Also, 138 of the 180 air toxics, plus diesel PM, were assessed for risk in the 2011 NATA. (Diesel PM risk was only assessed for noncancer effects.) Therefore, these risk estimates may represent only a subset of the total potential risks associated with air toxics.

2: What do these estimates mean to me?
A: The results of NATA assessments provide estimates of the total amount of air toxics in an area as well as a general estimate of the geographic patterns of potential risk within each State and county in the U.S. in 2011. The results should not be used as an absolute measure of whether an individual's risk is high, but can be used to guide a more specific assessment in that area.

NATA was not designed to be a definitive tool for assessing risks because it has many limitations in data and methods. In addition, this assessment estimates risks associated with a modest range of individual behaviors using ambient levels averaged across a given census tract and averaged across multiple emissions points at a given facility. Such exposures are different from the exposures experienced by the most exposed individuals in a tract. The national-scale assessment contains uncertainties in emissions levels, exposure concentrations, and dose-response information, and lacks the level of refinement that might enable us to adequately assess the highest exposures found in localized "hot spots" (i.e., exposures to individuals who live close to emitting sources. Consequently, the results should not be used as an absolute measure of risk. Rather, they should be used to focus or target more refined measurement and assessment activities.

3: How accurate is NATA?
A: NATA is a state-of-the-science screening tool that does not incorporate refined information about emission sources, but rather, uses general information about sources to develop estimates of risks using analytical methods. NATA assessments provide screening-level estimates of the risk of cancer and other serious health effects from breathing (inhaling) air toxics in order to inform both national and more localized efforts to identify and prioritize air toxics, emission source types, and locations that are of greatest potential concern in terms of contribution to population risk.

Uncertainties are inherent in analyses like this (uncertainty in the emissions, actual population exposures, and dose-response or health effects information). For example, results are more uncertain at finer spatial scales. Thus, the results are appropriate to answer questions such as what pollutants or source sectors might be associated with higher risks than others, but not for determining exactly how many people are exposed to certain levels of absolute risk, or to determine what's safe and what's not.

4: How does the cancer risk identified in this assessment compare to lifetime cancer risk from all causes?
A: The 2011 NATA estimates that, on average, approximately 1 out of every 25,000 Americans (40-in-1 million) could contract cancer from breathing air toxics if exposed to 2011 emission levels for 70 years. These risks are unevenly distributed. Note that the NATA risk estimates are subject to limitations in the data, modeling, and default assumptions used routinely in any risk assessment. For example, NATA does not consider ingestion exposures or indoor sources of pollutants. Also, NATA only estimates chronic cancer risks for those air toxics that EPA is currently able to quantify with available dose-response data. Therefore,

these risk estimates may represent only a subset of the total potential cancer risk associated with air toxics. NATA risk estimates should be compared with caution to other estimates of risk available.

5: NATA presents risk data down to the census tract level. Are the results accurate enough to draw conclusions at this scale?
A: EPA recommends that the census tract data be used to determine geographic patterns of risks within counties rather than to pinpoint specific risk values for each census tract. We developed NATA as a tool to inform both national and more localized efforts to collect air toxics information and characterize emissions (e.g., to prioritize pollutants and geographic areas of interest for more refined data collection such as monitoring). We feel reasonably confident that the patterns (i.e., relatively higher and lower levels of risk within a county), represent actual fluctuations in overall average population risks within the county. We are less confident that the assessment pinpoints the exact locations where higher risk exists, or that the assessment captures the highest risks in a county.

6: Based on NATA, can EPA determine which areas and/or populations are at greatest risk from air toxics?
A: This assessment has characterized geographic patterns and ranges of risks across the country. However, in general, we see that larger urban areas tend to carry larger risk burdens than smaller urban and rural areas because the emissions of air toxics tend to be higher in areas with more people. This trend is not universal and can vary from pollutant to pollutant, according to its sources, and may also be affected by exposures and risk from non-inhalation and indoor sources of exposure.

7: How does this assessment of 2011 air toxics data compare to previous national-scale assessments?
A: Due to the extent of improvements in our methodology (e.g., inventory improvements, modeling changes, background calculation revisions, and changes in health benchmarks), it is not meaningful to directly compare the 2011 assessment with previous assessments. Before changes in risk levels may be attributable to specific reduction efforts, these assessment changes must be considered. Improvements made to the methods since the 2005 NATA include, but are not limited to:

- The 2010 Census;
- Improved meteorological data from an increased number of stations;
- Improved emissions inventory or location information for oil and gas wells;
- Updated model for onroad emissions with specific emission categories for cold start emissions and extended idle exhaust;
- More complete port and underway inventories;
- Use of both CMAQ and AERMOD results to take advantage of the strengths of each model; and
- Use of a newer exposure model, HAPEM7.

8: Has air quality improved?
A: Since 1990, EPA has made significant progress in reducing emissions of air toxics from stationary, mobile, and indoor sources, finalizing National Emissions Standards for Hazardous Air Pollutants, or MACT standards, to reduce toxic emissions from over 174 categories of industrial sources. These rules result in 1.7 million fewer tons of air toxic emissions every year.

The EPA has also completed all of the required emissions standards for smaller sources known as area sources. Individual area source facilities typically have much lower emissions, but these sources can be numerous and widespread, including in locations that are heavily populated. In some urban areas, the sum of area source emissions for a category can be much greater than emissions from major sources. Examples of area sources are gas stations and dry cleaners. Measured from the 1990 baseline inventory, we have subjected between 90 and 100 percent of the area sources of urban air toxic pollutants to standards and have subjected 90 percent of the sources of seven potentially bio-accumulative toxic pollutants to standards. We project that all of the regulated area sources will be in compliance no later than 2014.

Many motor vehicle, nonroad equipment, and fuel emission control programs of the past have reduced air toxics and will continue to provide significant emission reductions in the future. Mobile source emissions have been reduced by approximately 50 percent, about 1.5 million tons of HAPs, since 1990. With additional fleet turnover, we expect these reductions to increase to 80 percent by the year 2030. In addition, mobile source diesel onroad and nonroad particulate matter decreased by about 27 percent from 1990 to 2005. Significant additional reductions (roughly 90 percent) are projected from 2005 to 2030 as many of the recent mobile source rules targeting diesel engines go into effect. Also, onroad and nonroad benzene emissions continue to decrease and monitoring data reflect this downward trend.

The public health improvement associated with these reductions in emissions will depend on a number of factors including which chemicals were reduced and where the reductions occurred relative to where people live and work.

9: Can the NATA assessment results be used to evaluate exposures at specific points of interest, e.g., near schools, day care centers, or hospitals?
A: NATA is not designed to predict actual risks at a specific location. NATA can be used to identify and prioritize air toxics, emission source types and locations which are of greatest potential concern in terms of contributing to population risk. It is a screening assessment which uses general information about sources along with other information about a facility (how tall the emissions stacks are, for example), to develop estimates of risks which are averaged over a census tract. It does not incorporate finely detailed information about emission sources, or other information that would be necessary to estimate risks at a specific location.

If a particular area is projected to experience low risks, and we are reasonably confident that the information on the significant emission sources is accurate, then we are fairly confident that risks actually are low, and there is no need to develop a more detailed assessment for that area. Conversely, if NATA estimated risks in a particular area are high, we know that refined assessments may be needed to accurately characterize risks these risks in that area.

This screening approach helps EPA and other air pollution control agencies to focus resources on areas where the potential for health risks are highest.

10: I am able to locate a specific facility location from the map and get a risk at that location. How accurate is that risk value?
A: Included in the results section of the 2011 NATA is a link to EPA's 2011 NATA Web App, a GIS Tool that can be used to develop maps that show the risk levels estimated for each census tract. Using these maps, it is then possible to identify the locations of specific buildings (e.g., schools, day care centers, hospitals, etc.), by entering their specific location information (address or latitude/longitude data) into the location query box. These buildings will then be located within a specific census tract and the NATA results for that tract are readily seen. It should be noted that the concentrations and risk estimated are averaged across the tract and do not necessarily reflect the possible impacts that could occur in the immediate vicinity of these buildings. More focused assessments (e.g., air toxics monitoring or local-scale risk assessments), would be needed to more accurately determine those concentrations and risks.

11. Why is there risk from biogenic emissions?
A: Biogenic emissions are emissions from natural sources, such as plants and trees. These sources emit hazardous air pollutants (HAP), such as formaldehyde, acetaldehyde, and methanol. Formaldehyde and acetaldehyde are key risk drivers in 2011 NATA. These sources also emit large quantities of other volatile organic compounds that are not classified as HAP but can react in the atmosphere with manmade emissions to form HAP.

In NATA, the biogenic emissions source group only includes the primary emissions, or those directly emitted into the atmosphere. (Any secondary formation of pollutants is included in the secondary source group.) Biogenic emissions are computed by a model that uses information about the vegetation and land use across an area, as well as environmental conditions in that area such as the temperature and the amount of solar radiation received by an area. More information about how biogenic emissions were computed and modeled in the 2011 NATA can be found in Section 2 of the TSD.

Fire Questions

1. Were fires included in the 2011 NATA?
A: Yes. Prescribed fires, wildfires, and agricultural burning were included in the 2011 NATA. EPA worked with the United States Forest Service (USFS) to develop the emissions estimates for wildfires and prescribed fires for the 2011 National Emissions Inventory (NEI). Some wildfire and prescribed fire data was based on remote sensing, state-submitted data as well as federal agency burn report data. The emissions estimates for agricultural burning fires came from state-submitted data or EPA estimates based on satellite data.

In the 2011 NATA, fires were modeled using CMAQ. CMAQ allows EPA to take into account details that are specific to the fires included. For example, in the NEI, EPA had day-specific emissions information for wildfires and fires from prescribed burning, compared to some other emissions sources that have annual average emissions. Also, using data about the high temperatures of the fires, EPA was able to account for the extra buoyancy of the emission plume and its vertical distribution in the atmosphere in the air quality modeling.

2. What does NATA show regarding impacts of wildfires, prescribed fires and agricultural burning?
A: Prescribed fires, wildfires, and agricultural burning were modeled together in NATA and their impacts cannot be separated. Emissions from each fire type are estimated separately in the NEI, but ambient concentrations, exposure concentrations, and risks are grouped together.

3. What are the uncertainties in risks from emissions from fires?
A: The magnitude and location of fires vary from year to year, so the long-term (or chronic) risk could be different from the risks presented in the 2011 NATA for more persistent and consistent sources. The CMAQ model includes only the 48 continental United States, so risks from fires are not estimated in Alaska, Hawaii, Puerto Rico, or the Virgin Islands.

4. What is being done to reduce air pollution from wildfires and prescribed fires?
A: The threat from wildfires can be mitigated through management of wildland vegetation. Prescribed fires are one tool that land managers can use to reduce fuel load, unnatural understory and tree density, thus helping to reduce the risk of catastrophic wildfires which are frequently of long duration and wide impact as well as causing hazardous levels of air pollutants. Allowing some wildfires to continue and the thoughtful use of prescribed fire can influence the occurrence of catastrophic wildfires, which may reduce the probability of fire-induced smoke impacts and subsequent health effects. The EPA is committed to working with federal land managers, other federal agencies, tribes and states to effectively manage prescribed fire use to reduce the impact of wildfire-related emissions. Prescribed fires are typically managed to minimize impacts through the use of Basic Smoke Management Practices and smoke management programs. USDA and DOI both support efforts to conduct more research into smoke management through the Joint Fire Sciences Program and support broad interagency efforts to address smoke from both wildfires and prescribed fires through the National Wildland Fire Coordinating Group and their Smoke Committee.

Mobile Source Questions

1: How accurate are risk estimates for mobile sources in my census tract?
A: NATA is a state-of-the-science screening tool that does not incorporate refined information about emission sources, but rather, uses general information about sources to develop estimates of risks using analytical methods. NATA assessments provide screening-level estimates of the risk of cancer and other serious health effects from breathing (inhaling) air toxics in order to inform both national and more localized efforts to identify and prioritize air toxics, emission source types, and locations that are of greatest potential concern in terms of contribution to population risk.

Accurately capturing the level of emissions for sources that move from place to place is challenging, particularly at fine spatial scales. For cars, trucks, buses and motorcycles, running emissions are allocated to census tracts using roadways, but activity on those roads is estimated using population, which is not always a good surrogate for traffic volume. Also, a substantial portion of highway vehicle emissions do not actually occur on roads, but are associated with vehicles starting or extended idling. Different surrogates are used for these emissions, which may not always accurately reflect the actual location of emissions.

There is even more uncertainty associated with nonroad sources, such as construction equipment, lawn and garden equipment, and recreational vehicles. Equipment population, age and activity values are not tracked systematically and must be estimated. In addition, emissions for these sources are often spatially allocated based on how land is used, and land use surrogates may not track well with actual activity. Furthermore, emissions are first allocated from the national to the county level in the NONROAD emissions model using one set of surrogates, then allocated to the census tract using a second set of surrogates. Thus, results for mobile sources are very uncertain at the census tract level and must be interpreted with caution. Results are more certain at larger geographic scales, such as regions and states.

It should be noted that EPA has recently integrated nonroad equipment emissions into the MOVES mobile source emissions model, and is planning to update activity estimates in the model. EPA is thus actively looking for data related to nonroad populations and activity, including geographic allocation data. EPA recognizes that these data can influence NATA results and therefore welcomes suggestions.

2: Onroad and nonroad mobile sources are large contributors to overall risk in the 2011 assessment. What is the Agency doing to reduce emissions of mobile source air toxics?
A: Mobile source hazardous air pollutant emissions have been reduced by approximately 50 percent, about 1.5 million tons since 1990. With additional fleet turnover, EPA expects these reductions to grow to 80 percent by the year 2030. In addition, mobile source diesel onroad and nonroad particulate matter emissions decreased by about 27 percent from 1990 to 2005. EPA projects significant additional reductions (roughly 90 percent) from 2005 to 2030 as many of the recent mobile source rules targeting diesel engines go into effect.

The EPA's most recent regulatory programs that significantly reduces mobile source air toxics are Tier 3 vehicle and fuel standards. These requirements, issued in 2014, will reduce emissions of air toxics from motor vehicles between 10 and 30 percent by 2030, depending on the pollutant.

Another recent regulatory program which reduced mobile source air toxics was the 2007 mobile source air toxics rule, which controlled the benzene content of gasoline, as well as vehicle emissions at cold temperatures and emissions from portable fuel containers. A recent assessment in Anchorage, Alaska found a reduction in ambient benzene of more than 50 percent, and the fuel benzene standard was a major contributing factor.

Other programs which are reducing mobile source air toxics are low-sulfur gasoline and diesel requirements, heavy-duty engine and vehicle standards, controls for small spark-ignition engines and recreational marine engines, the locomotive and commercial marine rule, standards for nonroad diesel engines, and the North American and Caribbean Emission Control Areas (ECAs) established to reduce emissions from ships.

Moreover, non-regulatory initiatives are also reducing mobile source air toxics. Examples include the National Clean Diesel Campaign, SmartWay, and EPA's Ports Initiative. In addition, EPA's Diesel Emissions Reduction Program (known as "DERA") was created to deploy pollution-controlling technologies in diesel fleets. Clean diesel projects yield an immediate public health and air quality benefit. The EPA estimates that for every dollar invested in reducing diesel exhaust, a community may achieve up to 13 dollars in public health benefits. From 2008 to 2013, the EPA awarded $569 million to retrofit or replace nearly 73,000 engines in vehicles, vessels, locomotives or other pieces of equipment. The EPA estimates that these projects will reduce emissions by 14,700 tons of fine particle pollution over the lifetime of the affected engines. For more information, visit http://www2.epa.gov/cleandiesel.

Learn more about EPA's programs to reduce air toxics from mobile sources.

3: Why are only noncancer risks calculated for diesel PM? Isn't there a cancer unit risk available?
A: In this assessment, the potential risk from diesel PM is not addressed in the same fashion that other pollutants are. This is because EPA currently does not have a cancer unit risk estimate (URE) for diesel exhaust. In the 2002 Health Assessment Document for Diesel Engine Exhaust, EPA concluded that diesel exhaust is likely to be carcinogenic to humans at environmental levels of exposure, but found that data from the health studies available at the time were not suitable for estimating cancer potency. However, EPA has concluded that diesel exhaust is among the substances that the national-scale assessment suggests pose the greatest risk. The 2002 Health Assessment Document evaluated several human epidemiology studies linking increased lung cancer with diesel PM. Exposures in several of these epidemiology studies are in the same range as ambient exposures throughout the United States.

Recently, several large epidemiology studies have been published that strengthen the weight of evidence that diesel exhaust is carcinogenic to humans. Two of these studies included quantitative estimates of exposure. Partly on the basis of these studies, the International Agency for Research on Cancer elevated its classification of diesel exhaust to "carcinogenic to humans" (Class 1) in 2012.

In 2012, EPA requested that the Health Effects Institute (HEI) evaluate the suitability of the new epidemiology studies for developing a cancer potency. In November 2015, HEI published its report on these new studies, and concluded that they are sufficiently robust to estimate quantitative cancer risks and estimate uncertainties. EPA is currently reviewing this report.

These new studies underscore the importance of continuing to move forward in reducing emissions and exposures. Because diesel exhaust exposure is associated with serious negative health effects (both cancer and noncancer), EPA has and continues to take aggressive action to reduce diesel emissions through stringent standards for heavy trucks and engines. As a result of these aggressive actions, onroad diesel engines manufactured in 2007 and later have much more advanced emission control systems, resulting in much lower emissions with different composition than the diesel engines which formed the basis of the currently available epidemiology studies. Thus a cancer potency based on available epidemiology studies may not be relevant to newer technology diesels.

In addition to the potential for lung cancer risk, there is a significant potential for noncancer health effects based on the contribution of diesel PM to ambient levels of fine particles. Exposure to fine particles has been linked to significant public health impacts, including respiratory and cardiovascular effects, as well as premature mortality. These effects are not specifically presented in the national-scale assessment analysis but are considered in setting and implementing EPA's National Ambient Air Quality Standards for $PM_{2.5}$.

Also, EPA has designated a chronic Reference Concentration (RfC) for diesel PM of 5 $\mu g/m^3$ based on specific noncancer effects found in several animal studies which showed adverse changes in lungs such as inflammation and lesions. The 2011 NATA uses this value in estimating the diesel PM hazard quotient. More information on health effects associated with diesel PM can be found in the Health Assessment Document for Diesel Engine Exhaust.

4: There has been increased concern about the health effects associated with pollution near roads. What can the 2011 NATA tell us about communities potentially at greater health risk from exposure to near-road pollution?

A: There is a large body of research that consistently shows that populations spending a significant amount of time near heavily-traveled roads experience increased risks for a number of adverse health effects. Air quality measurement studies also indicate that elevated levels of pollution can be found near roads. Scientists are researching the relationship between the composition of the complex mixture of air toxics and other pollutants people are exposed to near these roads, and the observed adverse health effects.

Research findings indicate that roadways generally influence air quality within a few hundred meters - about 500-600 feet downwind from the vicinity of heavily traveled roadways or along corridors with significant trucking traffic or rail activities. For any given location, NATA's exposure estimates of populations near major roads may not be accurate as a result of limitations in the underlying data. NATA's air quality modeling does not have the resolution to model elevated concentrations along individual roadways. However, HAPEM7 exposure modeling accounts for the impact of populations living near roads on average census tract exposures. As such, NATA can be used as a screening tool to help identify populations with higher exposures to air toxics due to a greater density of traffic in the area where they work and live. More refined modeling should be used to characterize air quality in areas with populations experiencing potentially elevated exposures of near-roadway pollutants.

EPA has a web site focused on near-roadway air pollution and health, which can be found at the following link: http://www3.epa.gov/otaq/nearroadway.htm. There is also an EPA web site about ongoing near-source air pollution research, found here: http://www2.epa.gov/air-research/near-source-air-pollution-research.

5: NATA results show significant risks associated with a port in my community. How accurate are the risk estimates associated with ports, and what can be done to reduce these risks?

A: As with other sources, NATA results for ports should be used to identify locations where additional analysis is warranted. There are a number of uncertainties and limitations in NATA's analysis of ports. First, although emissions from various sources contribute to overall pollutant concentrations in ports, only emissions from commercial marine vessels are included within ports in NATA. Also, port emissions for commercial marine vessels come from state and local agency submittals or, in most cases, EPA's estimates. EPA's estimates are based on a 2002 inventory, projected to 2011 using regional adjustment factors to account for growth. Thus, differences in growth among ports in a given region of the country were not accounted for in the EPA estimates. In addition, the boundaries of ports are handled in a more simplified way than they would be in a local assessment, because it is not feasible to do more refined modeling in a national-scale assessment (See Section 2 of the Technical Support Document). Finally, emission estimates for toxics from commercial marine vessels are based on extremely limited data.

Despite limitations in assessment of air toxics at ports in this assessment, NATA indicates that people who live and work near ports may experience elevated risks. EPA has taken a number of actions which have reduced risks since 2011. These actions include Tier 2 and Tier 3 standards on oceangoing marine vessels, sulfur control on marine fuel oil, and designation of an emission control area (ECA) off our coasts (http://www3.epa.gov/otaq/oceanvessels.htm#fr). Finally, EPA has established a ports initiative to develop and implement sustainable ports strategies (http://www2.epa.gov/ports-initiative).

6: What does this NATA say about risk from airports?

A: NATA is a state-of-the-science screening tool that does not incorporate refined information about emission sources, but rather, uses general information about sources to develop estimates of risks using analytical methods. NATA assessments provide screening-level estimates of the risk of cancer and other serious health effects from breathing (inhaling) air toxics in order to inform both national and more localized efforts to identify and prioritize air toxics, emission source types, and locations that are of greatest potential concern in terms of contribution to population risk.

While airports are small contributors to the estimate of national air toxics risks, localized impacts can be significant, especially for people living and working in close proximity to an airport. When interpreting

NATA data on airport air toxics impacts it is important to be aware of limitations in the data used. For example, emission inventory estimates at general aviation airports are based on nationwide estimates of the mix of aircraft types using those airports. However, the mix at individual airports can be differ significantly, which could significantly impact results. Also, impacts can be significantly affected by local meteorological and operating conditions, which are not fully addressed in a national-scale analysis. In addition, NATA's air quality modeling does not have the resolution to model concentrations at specific distances from individual airports.

A potential public health concern that should be noted is exposure to emissions from piston-engine aircraft, which still use leaded gasoline. EPA is evaluating the impact of these lead emissions using measurements and much more refined modeling than used in NATA, in order to make a determination about whether these lead emissions cause or contribute to air pollution which may reasonably be anticipated to endanger public health and welfare. Information on EPA's evaluation of lead emissions from piston-engine aircraft can be found at: http://www3.epa.gov/otaq/aviation.htm.

To: Strum, Madeleine[Strum.Madeleine@epa.gov]
From: Kelly.Petersen@LA.gov
Sent: Tue 7/7/2015 3:22:27 PM
Subject: FW: DuPont Stack Parameters
EPA Modeling SpreadsheetDuPont.xlsx
Poly Building Fans.xlsx
ATT00001.txt

;;;
;;;

From: Doris.B.Grego@dupont.com [Doris.B.Grego@dupont.com]
Sent: Monday, July 06, 2015 1:14 PM
To: Kelly Petersen
Subject: DuPont Stack Parameters

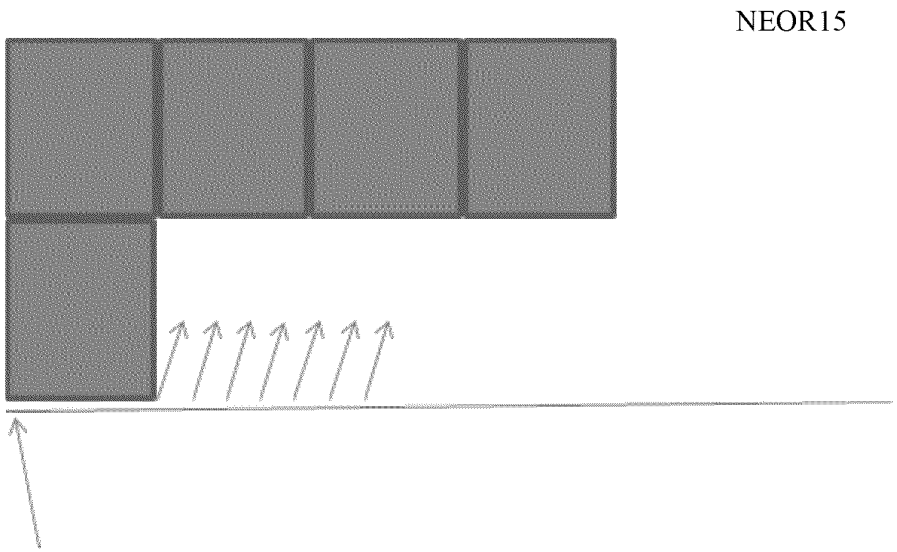
Attached is the revised EPA Modeling spreadsheet for the chloroprene sources at the DuPont Facility located in LaPlace, Louisiana. The changes are in red.

Two items need to be clarified.

1. On the chloroprene tab of the Modeling spreadsheet, the sources highlighted in pink do not discharge directly to the atmosphere, these sources are routed through on the of the vents listed in rows 1 through 39.

For example sources NEO 222 thru 226 (rows 99 to 103) discharge through vent RPN015 which is source NEOR15 (row 1). Only the sources on rows 1 through 39 should be modeled.

See example below.



RPN015 is the release point

NEO222 NEO223 NEO224 NEO225 NEO22

2. The second source on the spreadsheet, NEO185, consists of seventeen wall fans located on the Poly Building. Twelve fans are located on the east wall of the building, five are located on the south wall of the building. Attached is an Xcel file which includes two diagrams, one for each wall, and a table with the dimensions, emissions and locations of the fans. The fans are either 8' x 8' or 4' x 4', they are used to pull air from the building to minimize the concentration of chloroprene. For permitting and reporting purposes, I grouped all the fans into one fugitive emission source. For modeling purpose, they should be considered individually.

If you have any questions or need additional information, please let me know.

Doris B. Grego, P.E.

Senior Environmental Consultant

985-536-5437

To: Morris, Mark[Morris.Mark@epa.gov]
Cc: Thurman, James[Thurman.James@epa.gov]
From: Strum, Madeleine
Sent: Mon 12/14/2015 9:13:38 PM
Subject: FW: DuPont Stack Parameters
EPA Modeling SpreadsheetDuPont.xlsx
Poly Building Fans.xlsx
ATT00001.txt
chloroprene_emissions_with_detailed_releasepoint_info.xlsx

Ex. 5 - Deliberative

Madeleine Strum
U.S. Environmental Protection Agency
Office of Air Quality Planning and Standards/Air Quality Assessment Division/EIAG
919 541 2383 (voice)
919 541 0684 (fax

From: Kelly Petersen [mailto:Kelly.Petersen@LA.GOV]
Sent: Tuesday, July 07, 2015 11:22 AM
To: Strum, Madeleine <Strum.Madeleine@epa.gov>
Subject: FW: DuPont Stack Parameters

From: Doris.B.Grego@dupont.com [Doris.B.Grego@dupont.com]
Sent: Monday, July 06, 2015 1:14 PM
To: Kelly Petersen
Subject: DuPont Stack Parameters

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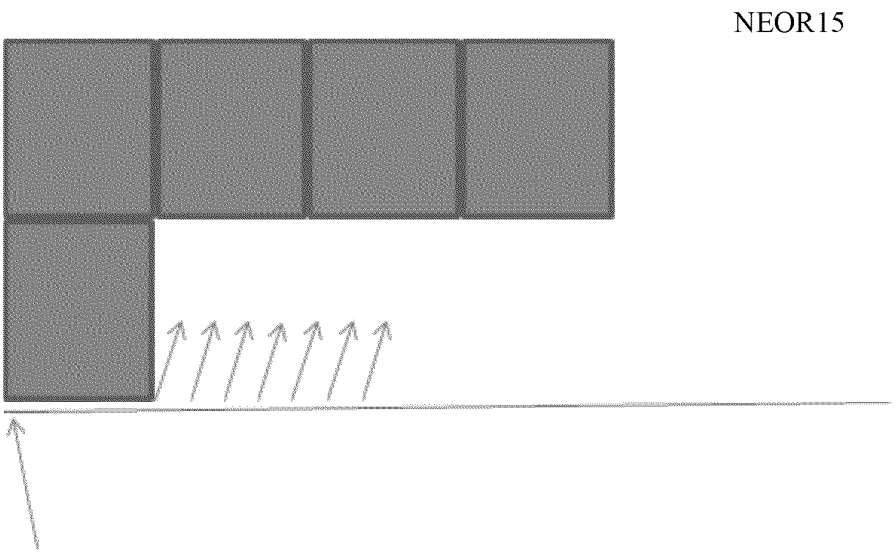

2. The second source on the spreadsheet, NEO185, consists of seventeen wall fans

located on the Poly Building. Twelve fans are located on the east wall of the building, five are located on the south wall of the building. Attached is an Xcel file which includes two diagrams, one for each wall, and a table with the dimensions, emissions and locations of the fans. The fans are either 8' x 8' or 4' x 4', they are used to pull air from the building to minimize the concentration of chloroprene. For permitting and reporting purposes, I grouped all the fans into one fugitive emission source. For modeling purpose, they should be considered individually.

If you have any questions or need additional information, please let me know.

Doris B. Grego, P.E.

Senior Environmental Consultant

985-536-5437

To: Palma, Ted[Palma.Ted@epa.gov]; Strum, Madeleine[Strum.Madeleine@epa.gov]; Morris, Mark[Morris.Mark@epa.gov]
From: Steve Fudge
Sent: Thur 12/10/2015 3:41:54 PM
Subject: RE: LADEQ would like HEM input files.
8026611_emisloc.xlsx
8026611_hapemis.xlsx
8026611_temporal.xlsx

Ted,

Here are the HEM3 inputs for 8026611.

Thanks,

Steve

From: Palma, Ted [mailto:Palma.Ted@epa.gov]
Sent: Thursday, December 10, 2015 7:04 AM
To: Strum, Madeleine <Strum.Madeleine@epa.gov>; Morris, Mark <Morris.Mark@epa.gov>; fudge.steve@ecrweb.com
Subject: RE: LADEQ would like HEM input files.

Steve can you send us the Hem input files for 8026611, the high chloroprene facility

thanks

Ted

Ted Palma

USEPA

OAQPS/HEID/ATAG

MD C539-02

RTP, NC 27711

919-541-5470 (work)

palma.ted@epa.gov

From: Strum, Madeleine
Sent: Wednesday, December 09, 2015 5:06 PM
To: Morris, Mark <Morris.Mark@epa.gov>
Cc: Palma, Ted <Palma.Ted@epa.gov>
Subject: RE: LADEQ would like HEM input files.

Mark—

We revised them for final NATA (using the updated release point information Doris provided). I've got the data in "FF10" format but I think you'd have to go to Steve to get the HEM formatted data.

Madeleine Strum
U.S. Environmental Protection Agency
Office of Air Quality Planning and Standards/Air Quality Assessment Division/EIAG
919 541 2383 (voice)
919 541 0684 (fax

From: Rimer, Kelly
Sent: Wednesday, December 09, 2015 4:59 PM
To: Morris, Mark <Morris.Mark@epa.gov>
Cc: Palma, Ted <Palma.Ted@epa.gov>; Strum, Madeleine <Strum.Madeleine@epa.gov>
Subject: LADEQ would like HEM input files.

Can you send to Ruben and cc me?

Possible?

Tx,

Kelly

Kelly Rimer

Leader, Air Toxics Assessment Group

US EPA

Office of Air Quality Planning and Standards

109 TW Alexander Drive

RTP. NC 27709

919-541-5368

To: Strum, Madeleine[Strum.Madeleine@epa.gov]; Morris, Mark[Morris.Mark@epa.gov]; fudge.steve@ecrweb.com[fudge.steve@ecrweb.com]
From: Palma, Ted
Sent: Thur 12/10/2015 12:03:52 PM
Subject: RE: LADEQ would like HEM input files.

Steve can you send us the Hem input files for 8026611, the high chloroprene facility

thanks

Ted

Ted Palma

USEPA

OAQPS/HEID/ATAG

MD C539-02

RTP, NC 27711

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From: Strum, Madeleine
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919 541 2383 (voice)
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From: Rimer, Kelly
Sent: Wednesday, December 09, 2015 4:59 PM
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Cc: Palma, Ted <Palma.Ted@epa.gov>; Strum, Madeleine <Strum.Madeleine@epa.gov>
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Kelly

Kelly Rimer

Leader, Air Toxics Assessment Group

US EPA

Office of Air Quality Planning and Standards

109 TW Alexander Drive

RTP. NC 27709

919-541-5368

To: Morris, Mark[Morris.Mark@epa.gov]; Strum, Madeleine[Strum.Madeleine@epa.gov]
Cc: Rimer, Kelly[Rimer.Kelly@epa.gov]
From: Palma, Ted
Sent: Mon 12/7/2015 4:29:13 PM
Subject: MSA Compare
MSA Compare 2011-2005.xlsx

compared the big ones and nothing looks unexplainable based on new approach and emissions

Ted Palma

USEPA

OAQPS/HEID/ATAG

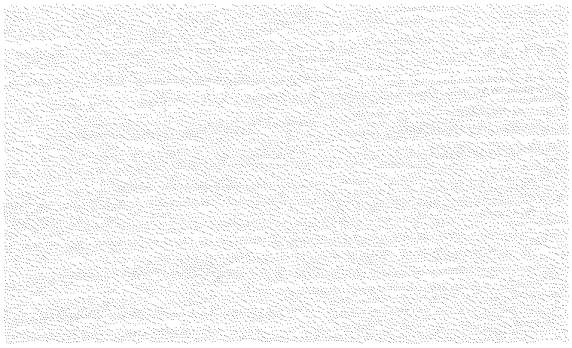
MD C539-02

RTP, NC 27711

919-541-5470 (work)

palma.ted@epa.gov

To: Smith, Darcie[Smith.Darcie@epa.gov]; Morris, Mark[Morris.Mark@epa.gov]
From: Hollingsworth, Terri
Sent: Fri 11/20/2015 9:17:22 PM
Subject: risk chapters in 2011 NATA TSD
Chpts 5 and 6 of 2011 NATA TSD Nov 20 2015.docx



Hi Darcie & Mark,

Will you two take a look at this clean version of chapters 5 & 6 of the NATA TSD (18 pages) to be sure it is accurate in its update from 2005. Please edit (red line) at will and I will incorporate it into the master document.

Many thanks!

Terri

Terri Hollingsworth

Air Toxics Assessment Group, C539-02

Health & Environmental Impact Division

Office of Air Quality Planning & Standards

U.S. Environmental Protection Agency

Research Triangle Park, NC 27711

919-541-5623

To: Kelly.Petersen@LA.gov[Kelly.Petersen@LA.gov]; Doris.B.Grego@dupont.com[Doris.B.Grego@dupont.com]; James.B.Allen@dupont.com[James.B.Allen@dupont.com]; Carlos.F.Saldana@dupont.com[Carlos.F.Saldana@dupont.com]; Palma, Ted[Palma.Ted@epa.gov]; Morris, Mark[Morris.Mark@epa.gov]; Casso, Ruben[Casso.Ruben@epa.gov]; Rimer, Kelly[Rimer.Kelly@epa.gov]; Strum, Madeleine[Strum.Madeleine@epa.gov]
From: PATRICK.A.WALSH@dupont.com
Sent: Thur 10/15/2015 10:27:32 PM
Subject: RE: Follow up on chloroprene modeling and additional questions

All,

I have reviewed all the appropriate information and my position hasn´t changed. I´m worried that EPA is going down the wrong path. Let me explain my thinking to you:

My problem is that the data as presented by EPA with regard to NATA are presented as "cancer risk":

Facility ID	FIPS	Tribal Code	Parameter	Pollutant	Risk Value (cancer risk reported in a million)	Facility Emissions (tpy)	Facility Name	State	County Name	Comme
80266	12095	Cancer risk	Chloropren	e	16.04	30.0775	E I DuPont de Nemours & Co - Pontchartrain Site	LA	St. John the Baptist	

(Taken from email from Madeleine Strum to Kelly Petersen, 6/24/15)

That would read to most people that chloroprene is a known, proven human carcinogen. But it hasn´t been proven, or even generally accepted, and EPA´s own toxicology data states such.

The IRIS database for chloroprene reads similarly to the IARC monograph:

"Under the Guidelines for Carcinogen Risk Assessment (U.S. EPA, 2005), there is evidence that chloroprene is ´likely to be carcinogenic to humans´"

Even the IRIS group will not explicitly state that chloroprene is a KNOWN human carcinogen. The entire series of documents discusses chloroprene´s carcinogenicity in mice and rats **only**. While they can be used as models for human physiology, mice and rats are NOT human, and there are numerous examples of materials that are spectacularly toxic to non-human animals but have little or no effect on humans (chocolate springs to mind). Therefore, it is, in my opinion, an irresponsibly large leap to present the chloroprene release data as definitely carcinogenic to humans by presenting it as "increased cancer risk".

In addition, the epidemiological data does not comport with the model at all. The following table

describes actual cancer rates for St. John Parish for the most recent 4-year period for which data is available:

Rank	County	Annual Incidence Rate(†) over rate period - cases per 100,000	Lower 95% Confidence Interval	Upper 95% Confidence Interval	Average Annual Count over rate period	Rate Period	Recent Trend	Recent 5-Year Trend (‡) in Incidence Rates	Lower 95% Confidence Interval	Upper 95% Confidence Interval
53	St. John the Baptist Parish(7,9)	460.8	432.3	490.7	209	2008-2012	stable	-2.2	-9.4	5.6

(Data from http://statecancerprofiles.cancer.gov/incidencerates/index.php?stateFIPS=22&cancer=001&race=00&sex=0&age=001&t

Given the following:

1. 50+ year history making chloroprene in St. John Parish
2. 20-30 year latency period for most cancers

According to the risk factors EPA attributes to our chloroprene emissions, St. John Parish should have the highest cancer rate in the state. This should be especially true given that our history of emitting chloroprene is much longer than the typical latency for cancer. But in actuality, St. John is in the **lowest quartile** of measured cancer rates in the state (#53 out of 66 parishes) and the rate of cancer is decreasing according to the 5-year trend. Thus, the model has a serious flaw as it doesn´t come close to reflecting real, published cancer rate data.

The above, taken together, indicate that EPA is planning to publish misleading data in an inflammatory way. Therefore, it would be irresponsible to publish it. I strongly urge EPA to reconsider its present course.

Patrick A. Walsh, CIH
E.I. DuPont De Nemours and Company
Safety, Health, Environmental, and PSM Manager
DuPont Performance Polymers Pontchartrain Works
LaPlace, LA 70068

(985) 536-5731 Work
(251) 321-5989 Mobile
Patrick.A.Walsh@dupont.com

Let's Solve. DUPONT

-----Original Appointment-----
From: Kelly Petersen [mailto:Kelly.Petersen@LA.GOV]
Sent: Tuesday, October 06, 2015 10:09 AM
To: Kelly Petersen; GREGO, DORIS B; ALLEN, JAMES B; SALDANA, CARLOS F; Palma, Ted; Morris, Mark; Casso, Ruben; 'Rimer, Kelly'; Strum, Madeleine; WALSH, PATRICK A.
Subject: Follow up on chloroprene modeling and additional questions
When: Tuesday, October 06, 2015 11:00 AM-12:00 PM (UTC-06:00) Central Time (US & Canada).
Where: `DEQ/Room 919 - OMF Conference

Please join a conference call at 11am central time on Tuesday, October 6th. The call in information is below.

Ex. 6 - Personal Privacy

To: South, Peter[South.Peter@epa.gov]
Cc: Sasser, Erika[Sasser.Erika@epa.gov]; Strum, Madeleine[Strum.Madeleine@epa.gov]; Morris, Mark[Morris.Mark@epa.gov]; Cook, Rich[Cook.Rich@epa.gov]; Palma, Ted[Palma.Ted@epa.gov]; Scavo, Kimber[Scavo.Kimber@epa.gov]
From: Rimer, Kelly
Sent: Wed 9/23/2015 8:44:29 PM
Subject: RE: NATA for Janet
NATA Status Janet 9-24-15.pptx

W attachment. Ug. Sorry.

From: Rimer, Kelly
Sent: Wednesday, September 23, 2015 4:40 PM
To: South, Peter
Cc: Sasser, Erika; Strum, Madeleine; Morris, Mark; Cook, Rich; 'Ted Palma'; Scavo, Kimber
Subject: NATA for Janet

It's now a briefing. And note we adjusted the language on slide 5 wrt the DuPont facility.

Thanks

Kelly

Kelly Rimer

Leader, Air Toxics Assessment Group

US EPA

Office of Air Quality Planning and Standards

109 TW Alexander Drive

RTP. NC 27709

919-541-5368

To: Strum, Madeleine[Strum.Madeleine@epa.gov]; Rimer, Kelly[Rimer.Kelly@epa.gov]; Morris, Mark[Morris.Mark@epa.gov]; Houyoux, Marc[Houyoux.Marc@epa.gov]; Scheffe, Rich[Scheffe.Rich@epa.gov]
From: Fox, Tyler
Sent: Tue 9/22/2015 9:39:38 PM
Subject: RE: latest NATA pager for Janet
2011 NATA Pager for Janet 9_22_15_v2_AQMGcmts.docx

Here are some suggested revisions and comments.

Thanks,

Tyler

From: Strum, Madeleine
Sent: Tuesday, September 22, 2015 3:00 PM
To: Rimer, Kelly; Morris, Mark; Houyoux, Marc; Fox, Tyler; Scheffe, Rich
Subject: latest NATA pager for Janet
Importance: High

Hi,

My understanding is that Erika will look at it this evening, and tomorrow it will go to Pete for Janet.

Madeleine Strum
U.S. Environmental Protection Agency
Office of Air Quality Planning and Standards/Air Quality Assessment Division/EIAG
919 541 2383 (voice)
919 541 0684 (fax

To: Rimer, Kelly[Rimer.Kelly@epa.gov]; Morris, Mark[Morris.Mark@epa.gov]; Houyoux, Marc[Houyoux.Marc@epa.gov]; Fox, Tyler[Fox.Tyler@epa.gov]; Scheffe, Rich[Scheffe.Rich@epa.gov]
From: Strum, Madeleine
Sent: Tue 9/22/2015 7:00:19 PM
Subject: latest NATA pager for Janet
2011 NATA Pager for Janet 9_22_15_v2.docx

Hi,

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Madeleine Strum
U.S. Environmental Protection Agency
Office of Air Quality Planning and Standards/Air Quality Assessment Division/EIAG
919 541 2383 (voice)
919 541 0684 (fax

To: Strum, Madeleine[Strum.Madeleine@epa.gov]; Morris, Mark[Morris.Mark@epa.gov]
From: Rimer, Kelly
Sent: Tue 9/22/2015 5:32:45 PM
Subject: 2011 NATA Pager for Janet 9_22_15.docx
2011 NATA Pager for Janet 9_22_15.docx

My comments.

Thanks!

To: Rimer, Kelly[Rimer.Kelly@epa.gov]; Strum, Madeleine[Strum.Madeleine@epa.gov]
Cc: Morris, Mark[Morris.Mark@epa.gov]
From: Palma, Ted
Sent: Fri 9/18/2015 3:43:41 PM
Subject: Janet 1 pager for 9/24
2011 NATA Pager for Janet 9_18_15.docx

I've made changes based on our discussions this week, Madie may update a few of the numbers. After 3pm today channel any changes through Madie.

Thanks

Ted

Ted Palma

USEPA

OAQPS/HEID/ATAG

MD C539-02

RTP, NC 27711

919-541-5470 (work)

palma.ted@epa.gov

To: Strum, Madeleine[Strum.Madeleine@epa.gov]; Morris, Mark[Morris.Mark@epa.gov]; Thurman, James[Thurman.James@epa.gov]
From: Palma, Ted
Sent: Wed 7/8/2015 1:27:16 PM
Subject: RE: DuPont Stack Parameters

Ex. 5 - Deliberative

Ted Palma

USEPA

OAQPS/HEID/ATAG

MD C539-02

RTP, NC 27711

919-541-5470 (work)

palma.ted@epa.gov

From: Strum, Madeleine
Sent: Tuesday, July 07, 2015 5:15 PM
To: Palma, Ted; Morris, Mark; Thurman, James

Subject: FW: DuPont Stack Parameters

Can you characterize these emissions based on the below information for AERMOD?

Any follow up questions?

From: Kelly Petersen [mailto:Kelly.Petersen@LA.GOV]
Sent: Tuesday, July 07, 2015 11:22 AM
To: Strum, Madeleine
Subject: FW: DuPont Stack Parameters

From: Doris.B.Grego@dupont.com [Doris.B.Grego@dupont.com]
Sent: Monday, July 06, 2015 1:14 PM
To: Kelly Petersen
Subject: DuPont Stack Parameters

Attached is the revised EPA Modeling spreadsheet for the chloroprene sources at the DuPont Facility located in LaPlace, Louisiana. The changes are in red.

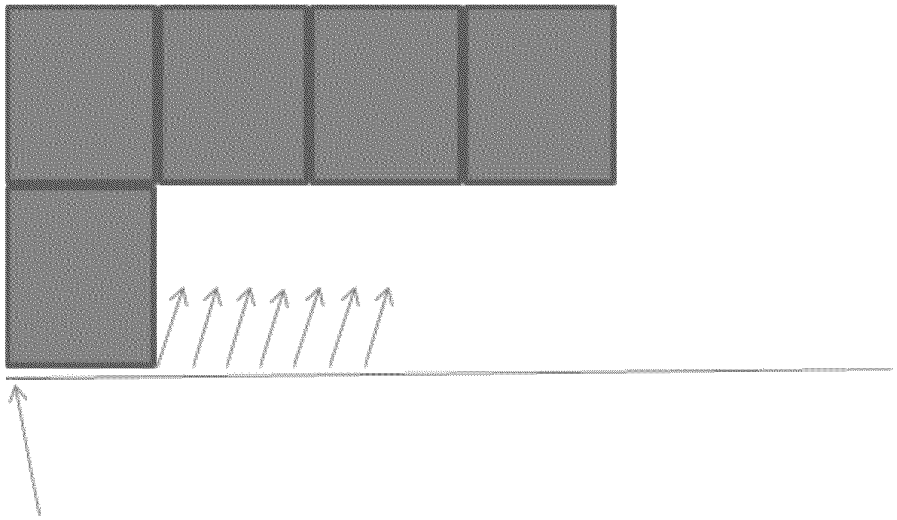
Two items need to be clarified.

1. On the chloroprene tab of the Modeling spreadsheet, the sources highlighted in pink do not discharge directly to the atmosphere, these sources are routed through on the of the vents listed in rows 1 through 39.

For example sources NEO 222 thru 226 (rows 99 to 103) discharge through vent RPN015 which is source NEOR15 (row 1). Only the sources on rows 1 through 39 should be modeled.

See example below.

NEOR15



RPN01is the release point

NEO222 NEO223 NEO224 NEO225 NEO22

2. The second source on the spreadsheet, NEO185, consists of seventeen wall fans located on the Poly Building. Twelve fans are located on the east wall of the building, five are located on the south wall of the building. Attached is an Xcel file which includes two diagrams, one for each wall, and a table with the dimensions, emissions and locations of the fans. The fans are either 8' x 8' or 4' x 4', they are used to pull air from the building to minimize the concentration of chloroprene. For permitting and reporting purposes, I grouped all the fans into one fugitive emission source. For modeling purpose, they should be considered individually.

If you have any questions or need additional information, please let me know.

Doris B. Grego, P.E.

Senior Environmental Consultant

985-536-5437

To: Palma, Ted[Palma.Ted@epa.gov]; Morris, Mark[Morris.Mark@epa.gov]; Thurman, James[Thurman.James@epa.gov]
From: Strum, Madeleine
Sent: Tue 7/7/2015 9:14:34 PM
Subject: FW: DuPont Stack Parameters
EPA Modeling SpreadsheetDuPont.xlsx
Poly Building Fans.xlsx
ATT00001.txt

Can you characterize these emissions based on the below information for AERMOD?

Any follow up questions?

From: Kelly Petersen [mailto:Kelly.Petersen@LA.GOV]
Sent: Tuesday, July 07, 2015 11:22 AM
To: Strum, Madeleine
Subject: FW: DuPont Stack Parameters

From: Doris.B.Grego@dupont.com [Doris.B.Grego@dupont.com]
Sent: Monday, July 06, 2015 1:14 PM
To: Kelly Petersen
Subject: DuPont Stack Parameters

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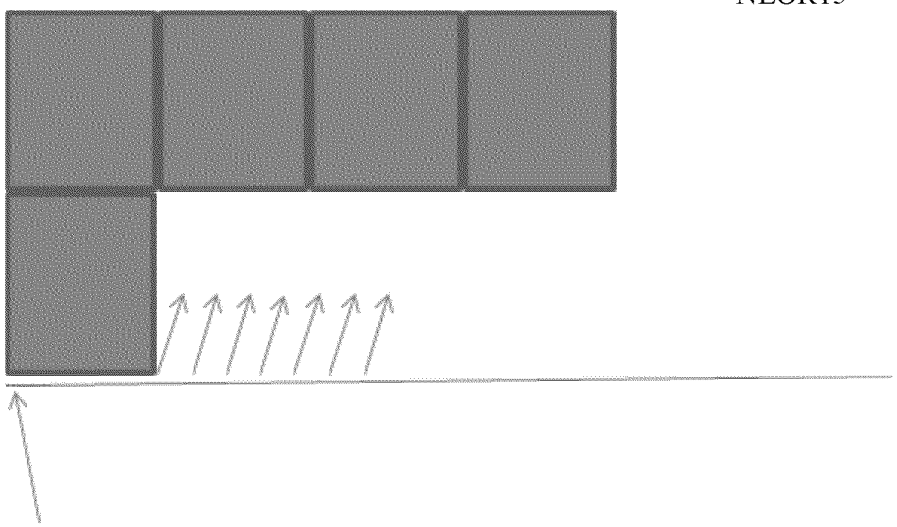
Two items need to be clarified.

1. On the chloroprene tab of the Modeling spreadsheet, the sources highlighted in pink do not discharge directly to the atmosphere, these sources are routed through on the of the vents listed in rows 1 through 39.

For example sources NEO 222 thru 226 (rows 99 to 103) discharge through vent RPN015 which is source NEOR15 (row 1). Only the sources on rows 1 through 39 should be modeled.

See example below.

NEOR15



RPN015 is the release point

NEO222 NEO223 NEO224 NEO225 NEO22

2. The second source on the spreadsheet, NEO185, consists of seventeen wall fans located on the Poly Building. Twelve fans are located on the east wall of the building, five are located on the south wall of the building. Attached is an Xcel file which includes two diagrams, one for each wall, and a table with the dimensions, emissions and locations of the fans. The fans are either 8' x 8' or 4' x 4', they are used to pull air from the building to minimize the concentration of chloroprene. For permitting and reporting purposes, I grouped all the fans into one fugitive emission source. For modeling purpose, they should be considered individually.

If you have any questions or need additional information, please let me know.

Doris B. Grego, P.E.

Senior Environmental Consultant

985-536-5437

To: Palma, Ted[Palma.Ted@epa.gov]; Strum, Madeleine[Strum.Madeleine@epa.gov]; Morris, Mark[Morris.Mark@epa.gov]
Cc: mozier.jill@ecrweb.com[mozier.jill@ecrweb.com]; battye.bill@ecrweb.com[battye.bill@ecrweb.com]; Hollingsworth, Terri[Hollingsworth.Terri@epa.gov]
From: Steve Fudge
Sent: Mon 1/27/2014 3:20:39 PM
Subject: Changes to the point source risk summary
Changes_to_risk_ge10.XLS

All,

Attached is an Excel file that summarizes significant changes that occurred in the point source risk summary. This change summary file addresses facilities with old or new cancer risk >= 10 in a million or an HI >= 10. New records are listed at the top of this file, changes are below that, and the bottom of the file lists existing high risk facilities (no changes). Column J notes if the row represents a new or changed entry.

Please let me know if you have any questions about this summary.

Thanks,

Steve

Steve Fudge

EC/R Inc.

501 Eastowne Dr.

Chapel Hill, NC 27514

919-433-8325

To: Strum, Madeleine[Strum.Madeleine@epa.gov]
From: Thurman, James
Sent: Tue 9/8/2015 4:50:01 PM
Subject: DuPont fan sources
dupont_chloroprene.xlsx

;;;
Here are the 17 fans that went to the source with agency release point id of 'PR0185', 2nd row of the file "EPA Modeling SpreadsheetDuPont.xlsx". They total to the 15.83 tons. I didn't see the fans in the pink rows but maybe I don't know what to look for. The lat/lon coordinates in the attached spreadsheet are those based on what Dupont sent. I modeled them as volume sources and the appropriate source characteristics (emissions in g/s , height, sigma-y, and sigma-z) are highlighted in yellow (last 4 columns).

Let me know if questions.

James A. Thurman, Ph.D.

U.S. EPA/OAQPS/AQAD

Air Quality Modeling Group (C439-01)

109 T.W. Alexander Drive

Research Triangle Park, NC 27711

Phone: (919) 541-2703

Fax: (919) 541-0044

Email: thurman.james@epa.gov

To: Strum, Madeleine[Strum.Madeleine@epa.gov]
From: Kelly.Petersen@LA.gov
Sent: Tue 7/7/2015 3:22:27 PM
Subject: FW: DuPont Stack Parameters
EPA Modeling SpreadsheetDuPont.xlsx
Poly Building Fans.xlsx
ATT00001.txt

;;;
;;;

From: Doris.B.Grego@dupont.com [Doris.B.Grego@dupont.com]
Sent: Monday, July 06, 2015 1:14 PM
To: Kelly Petersen
Subject: DuPont Stack Parameters

Attached is the revised EPA Modeling spreadsheet for the chloroprene sources at the DuPont Facility located in LaPlace, Louisiana. The changes are in red.

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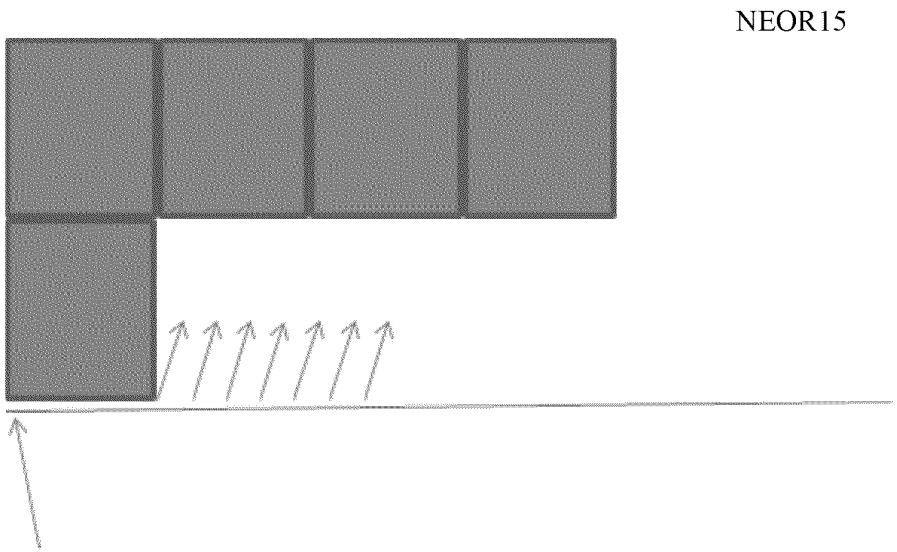
1. On the chloroprene tab of the Modeling spreadsheet, the sources highlighted in pink do not discharge directly to the atmosphere, these sources are routed through on the of the vents listed in rows 1 through 39.

For example sources NEO 222 thru 226 (rows 99 to 103) discharge through vent RPN015 which is source NEOR15 (row 1). Only the sources on rows 1 through 39 should be modeled.

See example below.



RPN015 is the release point

NEO222 NEO223 NEO224 NEO225 NEO22

2. The second source on the spreadsheet, NEO185, consists of seventeen wall fans located on the Poly Building. Twelve fans are located on the east wall of the building, five are located on the south wall of the building. Attached is an Xcel file which includes two diagrams, one for each wall, and a table with the dimensions, emissions and locations of the fans. The fans are either 8' x 8' or 4' x 4', they are used to pull air from the building to minimize the concentration of chloroprene. For permitting and reporting purposes, I grouped all the fans into one fugitive emission source. For modeling purpose, they should be considered individually.

If you have any questions or need additional information, please let me know.

Doris B. Grego, P.E.

Senior Environmental Consultant

985-536-5437

To: Deener, Kathleen[Deener.Kathleen@epa.gov]
From: Pagan, Ines
Sent: Fri 12/18/2015 3:36:34 PM
Subject: RE: Some materials for your records

Thanks, have a great weekend as well!

Ines

From: Deener, Kathleen
Sent: Friday, December 18, 2015 10:04 AM
To: Pagan, Ines <Pagan.Ines@epa.gov>
Subject: RE: Some materials for your records

I think everyone understands and probably has experienced a similar situation. Have a great weekend!

Kacee Deener, MPH

Senior Science Advisor

Office of Research and Development

(ph) 202.564.1990 | (mobile) 202.510.1490

deener.kathleen@epa.gov

From: Pagan, Ines
Sent: Friday, December 18, 2015 9:48 AM
To: Deener, Kathleen <Deener.Kathleen@epa.gov>
Subject: RE: Some materials for your records

I almost have a panic attack today when I heard 10 new voice mails, all high priority! Yes, beauty of new systems at work ☺

Ines

From: Deener, Kathleen
Sent: Friday, December 18, 2015 9:40 AM
To: Pagan, Ines <Pagan.Ines@epa.gov>
Subject: Re: Some materials for your records

Thanks Ines! And no worries about the call - I completely understand. Isn't new technology fun?

Sent from my iPhone

On Dec 18, 2015, at 9:16 AM, Pagan, Ines <Pagan.Ines@epa.gov> wrote:

> Hi Kacee,
>
> I feel terrible about not hearing your message on Wednesday, I have a call to get my new phone fixed.
>
> I wanted to share some materials I have prepared for internal use only (OAQPS/ORD), I wish I could have shared on Wednesday but I thought to share them with you for your records. The NATA rollout was successful and we are waiting for reactions to it…
>
> Thanks so much for your help!
>
> Ines Pagan
>
> DVM, Ph.D.
>
> Toxicologist
>
> Air Toxics Assessments Group

Office of Air Quality Planning and Standards

Health and Environmental Impacts Division

Phone: (919) 541-5469

Fax: (919) 541-0840

109 TW Alexander Dr.

Mailcode C539-02

Durham, NC 27711

<Chloroprene Q&A_draft.docx>

<Chloroprene_ Dupont_B.docx>

To: Deener, Kathleen[Deener.Kathleen@epa.gov]
From: Pagan, Ines
Sent: Fri 12/18/2015 2:16:56 PM
Subject: Some materials for your records
Chloroprene Q&A_draft.docx
Chloroprene_Dupont_B.docx

Hi Kacee,

I feel terrible about not hearing your message on Wednesday, I have a call to get my new phone fixed.

I wanted to share some materials I have prepared for internal use only (OAQPS/ORD), I wish I could have shared on Wednesday but I thought to share them with you for your records. The NATA rollout was successful and we are waiting for reactions to it…

Thanks so much for your help!

Ines Pagan

DVM, Ph.D.

Toxicologist

Air Toxics Assessments Group

Office of Air Quality Planning and Standards

Health and Environmental Impacts Division

Phone: (919) 541-5469

Fax: (919) 541-0840

109 TW Alexander Dr.

Mailcode C539-02

Durham, NC 27711

To: Wright, Michael[Wright.Michael@epa.gov]; Davis, Allen[Davis.Allen@epa.gov]; Flowers, Lynn[Flowers.Lynn@epa.gov]; D'Amico, Louis[DAmico.Louis@epa.gov]
Cc: Sacks, Jason[Sacks.Jason@epa.gov]; Birchfield, Norman[Birchfield.Norman@epa.gov]
From: Pagan, Ines
Sent: Mon 12/14/2015 9:40:33 PM
Subject: RE: Follow up on chloroprene modeling and additional questions

Ex. 5 - Deliberative

Ines Pagan

DVM, Ph.D.

Toxicologist

Air Toxics Assessments Group

Office of Air Quality Planning and Standards

Health and Environmental Impacts Division

Phone: (919) 541-5469

Fax: (919) 541-0840

109 TW Alexander Dr.

Mailcode C539-02

Durham, NC 27711

From: Wright, Michael
Sent: Monday, December 14, 2015 4:10 PM
To: Pagan, Ines <Pagan.Ines@epa.gov>; Davis, Allen <Davis.Allen@epa.gov>; Flowers, Lynn <Flowers.Lynn@epa.gov>; D'Amico, Louis <DAmico.Louis@epa.gov>
Subject: RE: Follow up on chloroprene modeling and additional questions

Ex. 5 - Deliberative

From: Mike Wright Ex. 6 - Personal Privacy
Sent: Monday, December 14, 2015 3:51 PM
To: Wright, Michael <Wright.Michael@epa.gov>
Subject: Re: Follow up on chloroprene modeling and additional questions

On Monday, December 14, 2015 12:29 PM, "Pagan, Ines" <Pagan.Ines@epa.gov> wrote:

Ex. 5 - Deliberative

Ex. 5 - Deliberative

Ines Pagan

DVM, Ph.D.

Toxicologist

Air Toxics Assessments Group

Office of Air Quality Planning and Standards

Health and Environmental Impacts Division

Phone: (919) 541-5469

Fax: (919) 541-0840

109 TW Alexander Dr.

Mailcode C539-02

Durham, NC 27711

From: Mike Wright Ex. 6 - Personal Privacy
Sent: Thursday, October 22, 2015 9:27 PM
To: Pagan, Ines <Pagan.Ines@epa.gov>
Subject: Re: Follow up on chloroprene modeling and additional questions

Ex. 5 - Deliberative

Mike

Sent from my iPhone

On Oct 22, 2015, at 5:21 PM, Pagan, Ines <Pagan.Ines@epa.gov> wrote:

Ex. 5 - Deliberative

Ines Pagan

DVM, Ph.D.

Toxicologist

Air Toxics Assessments Group

Office of Air Quality Planning and Standards

Health and Environmental Impacts Division

Phone: (919) 541-5469

Fax: (919) 541-0840

109 TW Alexander Dr.

Mailcode C539-02

Durham, NC 27711

From: Birchfield, Norman
Sent: Wednesday, October 21, 2015 7:13 PM
To: Wright, Michael <Wright.Michael@epa.gov>
Cc: Davis, Allen <Davis.Allen@epa.gov>; Pagan, Ines <Pagan.Ines@epa.gov>; Woodall, George <Woodall.George@epa.gov>; Mike Wright <jmikewright@yahoo.com>
Subject: Re: Follow up on chloroprene modeling and additional questions

Non-responsive

Sent from my iPhone

On Oct 21, 2015, at 5:13 PM, Wright, Michael <Wright.Michael@epa.gov> wrote:

Ex. 5 - Deliberative

From: Davis, Allen
Sent: Monday, October 19, 2015 9:57 AM
To: Pagan, Ines; Birchfield, Norman
Cc: Woodall, George; Wright, Michael
Subject: RE: Follow up on chloroprene modeling and additional questions

Ines,

Ex. 5 - Deliberative

Toxicologist

Air Toxics Assessments Group

Office of Air Quality Planning and Standards

Health and Environmental Impacts Division

Phone: (919) 541-5469

Fax: (919) 541-0840

109 TW Alexander Dr.

Mailcode C539-02

Durham, NC 27711

From: Rimer, Kelly
Sent: Friday, October 16, 2015 6:10 AM
To: Pagan, Ines
Subject: Fwd: Follow up on chloroprene modeling and additional questions

Ines,

Here is an email from Patrick Walsh. Let's bring in the IRIS folks on this and make it a priority to follow up with Patrick.

Thanks

Kelly Rimer

Leader, Air Toxics Assessment Group

US EPA

Office of Air Quality Planning and Standards

109 TW Alexander Drive

RTP. NC 27709

Begin forwarded message:

From: <PATRICK.A.WALSH@dupont.com>
Date: October 15, 2015 at 6:27:32 PM EDT
To: <Kelly.Petersen@LA.GOV>, <Doris.B.Grego@dupont.com>, <James.B.Allen@dupont.com>, <Carlos.F.Saldana@dupont.com>, <Palma.Ted@epa.gov>, <Morris.Mark@epa.gov>, <Casso.Ruben@epa.gov>, <Rimer.Kelly@epa.gov>, <Strum.Madeleine@epa.gov>
Subject: RE: Follow up on chloroprene modeling and additional questions

All,

I have reviewed all the appropriate information and my position hasn't changed. I'm worried that EPA is going down the wrong path. Let me explain my thinking to you:

My problem is that the data as presented by EPA with regard to NATA are presented as "cancer risk":

Facility ID	FIPS	Tribal Code	Parameter	Pollutant	Risk Value (cancer risk reported in a million)	Facility Emissions (tpy)	Facility State	County Comm Name
80266	22095		Cancer risk	Chloropren	16.04	0.0775 E I DuPont de Nemours & Co - Pontchartrain Site	LA	St. John the Baptist

(Taken from email from Madeleine Strum to Kelly Petersen, 6/24/15)

That would read to most people that chloroprene is a known, proven human carcinogen. But it hasn't been proven, or even generally accepted, and EPA's own toxicology data states such.

The IRIS database for chloroprene reads similarly to the IARC monograph:

"Under the Guidelines for Carcinogen Risk Assessment (U.S. EPA, 2005), there is evidence that chloroprene is 'likely to be carcinogenic to humans'"

Even the IRIS group will not explicitly state that chloroprene is a KNOWN human carcinogen. The entire series of documents discusses chloroprene's carcinogenicity in mice and rats **only**. While they can be used as models for human physiology, mice and rats are NOT human, and there are numerous examples of materials that are spectacularly toxic to non-human animals but have little or no effect on humans (chocolate springs to mind). Therefore, it is, in my opinion, an irresponsibly large leap to present the chloroprene release data as definitely carcinogenic to humans by presenting it as "increased cancer risk".

In addition, the epidemiological data does not comport with the model at all. The following table describes actual cancer rates for St. John Parish for the most recent 4-year period for which data is available:

Rank	County	Annual Incidence Rate(†) over rate period - cases per 100,000	Lower 95% Confidence Interval	Upper 95% Confidence Interval	Average Annual Count over rate period	Rate Period	Recent Trend	Recent 5-Year Trend (‡) in Incidence Rates	Lower 95% Confidence Interval	Upper 95% Confidence Interval
53	St. John the Baptist Parish(7,9)	460.8	432.3	490.7	209	2008-2012	stable	-2.2	-9.4	5.6

(Data from
http://statecancerprofiles.cancer.gov/incidencerates/index.php?stateFIPS=22&cancer=001&race=00&se

Given the following:

1. 50+ year history making chloroprene in St. John Parish

2. 20-30 year latency period for most cancers

According to the risk factors EPA attributes to our chloroprene emissions, St. John Parish should have the highest cancer rate in the state. This should be especially true given that our history of emitting chloroprene is much longer than the typical latency for cancer. But in actuality, St. John is in the **lowest quartile** of measured cancer rates in the state (#53 out of 66 parishes) and the rate of cancer is decreasing according to the 5-year trend. Thus, the model has a serious flaw as it doesn't come close to reflecting real, published cancer rate data.

The above, taken together, indicate that EPA is planning to publish misleading data in an inflammatory way. Therefore, it would be irresponsible to publish it. I strongly urge EPA to reconsider its present course.

Patrick A. Walsh, CIH

E.I. DuPont De Nemours and Company

Safety, Health, Environmental, and PSM Manager

DuPont Performance Polymers Pontchartrain Works

LaPlace, LA 70068

(985) 536-5731 Work

(251) 321-5989 Mobile

Patrick.A.Walsh@dupont.com

<image001.jpg>

-----Original Appointment-----
From: Kelly Petersen [mailto:Kelly.Petersen@LA.GOV]
Sent: Tuesday, October 06, 2015 10:09 AM
To: Kelly Petersen; GREGO, DORIS B; ALLEN, JAMES B; SALDANA, CARLOS F; Palma, Ted; Morris, Mark; Casso, Ruben; 'Rimer, Kelly'; Strum, Madeleine; WALSH, PATRICK A.
Subject: Follow up on chloroprene modeling and additional questions
When: Tuesday, October 06, 2015 11:00 AM-12:00 PM (UTC-06:00) Central Time (US & Canada).
Where: `DEQ/Room 919 - OMF Conference

Please join a conference call at 11am central time on Tuesday, October 6th. The call in information is below.

Meeting Number: 4341356

To join the conference call:
(1) Dial 888-363-4735, or 215-446-3657 for international calls.
(2) Enter the Meeting Number, then #

Thanks, Kelly Petersen

and conspicuously designated as "E-Contract Intended", this e-mail does not constitute a contract offer, a contract amendment, or an acceptance of a contract offer. This e-mail does not constitute a consent to the use of sender's contact information for direct marketing purposes or for transfers of data to third parties.

Francais Deutsch Italiano Espanol Portugues Japanese Chinese Korean

http://www.DuPont.com/corp/email_disclaimer.html

To: Rimer, Kelly[Rimer.Kelly@epa.gov]
Cc: Palma, Ted[Palma.Ted@epa.gov]; Smith, Darcie[Smith.Darcie@epa.gov]
From: Pagan, Ines
Sent: Mon 12/14/2015 2:29:51 PM
Subject: RE: Edited chloroprene Q & A sheet, please use this version!!!
Chloroprene Q&A.docx

Sorry about the previous email, please use this version.

Ines Pagan

DVM, Ph.D.

Toxicologist

Air Toxics Assessments Group

Office of Air Quality Planning and Standards

Health and Environmental Impacts Division

Phone: (919) 541-5469

Fax: (919) 541-0840

109 TW Alexander Dr.

Mailcode C539-02

Durham, NC 27711

From: Pagan, Ines
Sent: Monday, December 14, 2015 8:47 AM
To: Rimer, Kelly <Rimer.Kelly@epa.gov>
Cc: Palma, Ted <Palma.Ted@epa.gov>; Smith, Darcie <Smith.Darcie@epa.gov>
Subject: Edited chloroprene Q & A sheet, please use this version

Ines Pagan

DVM, Ph.D.

Toxicologist

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Office of Air Quality Planning and Standards

Health and Environmental Impacts Division

Phone: (919) 541-5469

Fax: (919) 541-0840

109 TW Alexander Dr.

Mailcode C539-02

Durham, NC 27711

To: Stewart, Michael[Stewart.Michael@epa.gov]
From: Pagan, Ines
Sent: Mon 12/14/2015 2:02:50 PM
Subject: FW: Draft of answers
Chloroprene QA tp.docx

Just so you are up to date on this issue. ;-)

Ines Pagan

DVM, Ph.D.

Toxicologist

Air Toxics Assessments Group

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Health and Environmental Impacts Division

Phone: (919) 541-5469

Fax: (919) 541-0840

109 TW Alexander Dr.

Mailcode C539-02

Durham, NC 27711

From: Palma, Ted
Sent: Monday, December 14, 2015 8:24 AM
To: Pagan, Ines <Pagan.Ines@epa.gov>
Subject: RE: Draft of answers

you may want Darcie to review this when she gets in

Ted

Ted Palma

USEPA

OAQPS/HEID/ATAG

MD C539-02

RTP, NC 27711

919-541-5470 (work)

palma.ted@epa.gov

From: Pagan, Ines
Sent: Sunday, December 13, 2015 9:05 PM
To: Rimer, Kelly <Rimer.Kelly@epa.gov>
Cc: Palma, Ted <Palma.Ted@epa.gov>
Subject: Draft of answers

Attached is a draft of answers, I need a little more context and I can edit the document first thing in the morning accordingly. There is a question on 2008 NATA better suited for Ted.

Ines Pagan

DVM, Ph.D.

Toxicologist

Air Toxics Assessments Group

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Health and Environmental Impacts Division

Phone: (919) 541-5469

Fax: (919) 541-0840

109 TW Alexander Dr.

Mailcode C539-02

Durham, NC 27711

To: Rimer, Kelly[Rimer.Kelly@epa.gov]
Cc: Palma, Ted[Palma.Ted@epa.gov]
From: Pagan, Ines
Sent: Mon 12/14/2015 2:04:34 AM
Subject: Draft of answers
Chloroprene Q&A.docx

Attached is a draft of answers, I need a little more context and I can edit the document first thing in the morning accordingly. There is a question on 2008 NATA better suited for Ted.

Ines Pagan

DVM, Ph.D.

Toxicologist

Air Toxics Assessments Group

Office of Air Quality Planning and Standards

Health and Environmental Impacts Division

Phone: (919) 541-5469

Fax: (919) 541-0840

109 TW Alexander Dr.

Mailcode C539-02

Durham, NC 27711

To: Murphy, Deirdre[Murphy.Deirdre@epa.gov]
From: Pagan, Ines
Sent: Fri 12/4/2015 9:30:16 PM
Subject: Draft chloroprene fact sheet
ICF_Chloroprene Dec. 4 2015B.docx

Deirdre,

I wanted to send you this file just in case you have any time to look at it before Wednesday. I have some format issues that I could not figure out how to fix (Acute Effects and Chronic Effects areas).

The draft is a red line doc I got from Susan and I made my edits on that. I still don't have the table, I will do that on Tuesday.

Thanks for all your help!

Ines Pagan

DVM, Ph.D.

Toxicologist

Air Toxics Assessments Group

Office of Air Quality Planning and Standards

Health and Environmental Impacts Division

Phone: (919) 541-5469

Fax: (919) 541-0840

109 TW Alexander Dr.

Mailcode C539-02

Durham, NC 27711

To: Birchfield, Norman[Birchfield.Norman@epa.gov]
Cc: Davis, Allen[Davis.Allen@epa.gov]
From: Pagan, Ines
Sent: Wed 12/2/2015 2:12:52 PM
Subject: FW: Follow-up on NATA
Thomas et al 2013.pdf
Yang et al Toxicol. in vitro 2012.pdf
Yang et al 2012 supplemental mmc1.doc
Allen et al. CD risk 2014.pdf
Allen et al. CD risk 2014 Appendix B..pdf

Attached are the studies Matt brought to our attention and below is an explanation on how we arrive at NATA results for Dupont's staff.

Allen, the studies are FYI and just to keep you up to date on our interactions with Matt and Dupont staff.

Ines Pagan

DVM, Ph.D.

Toxicologist

Air Toxics Assessments Group

Office of Air Quality Planning and Standards

Health and Environmental Impacts Division

Phone: (919) 541-5469

Fax: (919) 541-0840

109 TW Alexander Dr.

Mailcode C539-02

Durham, NC 27711

From: Rimer, Kelly
Sent: Friday, November 20, 2015 7:44 AM
To: Pagan, Ines <Pagan.Ines@epa.gov>; Smith, Darcie <Smith.Darcie@epa.gov>
Subject: FW: Follow-up on NATA

From: Matthew.W.Himmelstein@dupont.com [mailto:Matthew.W.Himmelstein@dupont.com]
Sent: Thursday, November 19, 2015 2:14 PM
To: Rimer, Kelly <Rimer.Kelly@epa.gov>
Cc: Lori.E.Sanders@dupont.com; Lassiter, Penny <Lassiter.Penny@epa.gov>; Debbie.J.Mulrooney@dupont.com; James.R.Damewood-JR@dupont.com
Subject: RE: Follow-up on NATA

Hi Kelly,

Attached are the references I was referring to. These are all peer-reviewed publications. Please share.

Thanks,

Matt

Matthew Himmelstein

DuPont Haskell Global Centers

Phone 302 451 4537

From: Mulrooney, Debbie J
Sent: Thursday, November 19, 2015 1:10 PM
To: HIMMELSTEIN, MATTHEW W
Cc: SANDERS, LORI ELIZABETH
Subject: FW: Follow-up on NATA

Matt,

See the last paragraph in the email that I just got from EPA. They are looking for references to the additional documents you mentioned on the call. Feel free to respond to directly to EPA, although if you do, I would include Lori Sanders on any communications you send to them, unless she tells you otherwise.

Debbie

Debbie Mulrooney
DuPont Engineering Research and Technology (DuET)
Environmental Engineering

Chestnut Run Plaza 723/1031
974 Centre Road

P.O. Box 2915

Wilmington, DE 19805
Office: +1.302.999.3346 Fax: +1.302.999.2614

From: Rimer, Kelly [mailto:Rimer.Kelly@epa.gov]
Sent: Thursday, November 19, 2015 12:41 PM
To: Mulrooney, Debbie J
Cc: Lassiter, Penny; Wharton, D Alonzo

Subject: Follow-up on NATA

Debbie,

Thank you for joining the call on Tuesday. In this email are several follow-up items related to our discussion.

First, as we discussed, NATA is a complex national screening analysis that estimates risks at the census tract level. The results are based on emissions from all sources that impact a particular tract, including large and small facilities and various types of mobile sources. It is our understanding that you are interested in chloroprene from the La Place facility and replicating the NATA analysis. Since chloroprene dominates the cancer risks from that tract, and we can help you get close to the answer we have in NATA for that tract, but it will not be an exact match.

If you were to conduct a tract-level analysis, here are the five steps you would take: (1) estimate emissions, (2) run a dispersion model to estimate ambient block-level concentrations, (3) aggregate block-level concentrations up to population-weighted census-tract level concentrations, (4) apply a factor to estimate the exposure concentrations, and (5) use the dose-response values to estimate risks and hazards.

As you can see, there are multiple steps, and the other (i.e., non-facility) contributors to the concentrations come into play. Here are some notes to get your facility emissions through the process and obtain a result close to NATA.

1. Use 2011 emissions from the publicly available National Emissions Inventory (NEI). We did confirm the facility's chloroprene emissions, stack parameters, and location coordinates with staff at the facility.

2. Use the Human Exposure Model, version 3 (HEM3, which contains AERMOD) or AERMOD itself to obtain ambient concentrations around the facility. The HEM model can be found here: http://www2.epa.gov/fera/risk-assessment-and-modeling-human-exposure-model-hem

If you install and run HEM3, you will also need to download the census files and the meteorological data files for the area. We can help answer questions about running HEM if you have any.

3. Take the modeled ambient block-level concentrations and multiply them by the block population. Then sum all of the population-weighted ambient concentrations in the tract. Divide that sum by the total tract population to get the population-weighted census tract-level ambient concentration. Remember the results we present in NATA are tract-level

results, not block-level results.

4. Run the ambient tract-level concentration through HAPEM7 to account for population mobility, etc. HAPEM7 won't be released until NATA is, but the ratio you need to multiply your ambient concentration by is 0.86 for chloroprene. If you want to use the older HAPEM model and run it yourself, you can find HAPEM here: http://www2.epa.gov/fera/human-exposure-modeling-hazardous-air-pollutant-exposure-model-hapem

5. Multiply the exposure concentration by 4.8×10^{-4}. This is the IRIS URE multiplied by a factor of 1.6 to account for the mutagenic mode of action. The application of the 1.6 factor is standard EPA practice for a mutagenic chemical such as chloroprene and is documented in the 2005 Supplemental Cancer Guidelines, which can be found here: http://www2.epa.gov/risk/supplemental-guidance-assessing-susceptibility-early-life-exposure-carcinogens.

If you had multiple carcinogens, you would add the tract-level risks together at this point.

Second, attached is a kmz file that will show you the *ambient* concentrations of chloroprene at census tracts in southern Louisiana. The highest concentration is 1.9 ug/m3. This would give you a cancer risk of approximately 900-in-1 million. However, after applying the exposure factor of 0.86, the tract-level risk is reduced to approximately 800-in-1 million, which is the number presented in NATA. As I indicated during our call, risks are not attributed to any facility. However, facility names are attributed to emissions (emissions are publically available information), and can be found on data tables and on the map when the emissions layer is turned on.

Third, on the call, Matt mentioned some additional documents related to chloroprene that have been published since the IRIS assessment in 2010. Is it possible for you to provide those citations? We think we know to what documents he was referring, but it would be good to be sure. Also, if you and/or he are interested in having a follow-up call with particular staff in our Office of Research and Development (ORD), let us know and who you would like to be on the call on your end and we will set up a meeting.

Thank you,

Kelly

Kelly Rimer

Leader, Air Toxics Assessment Group

US EPA

Office of Air Quality Planning and Standards

109 TW Alexander Drive

RTP. NC 27709

919-541-5368

To: Birchfield, Norman[Birchfield.Norman@epa.gov]
From: Pagan, Ines
Sent: Fri 10/16/2015 2:25:56 PM
Subject: RE: Follow up on chloroprene modeling and additional questions

I forgot to ask you if you shared the email with everyone you recommended to include for the meeting. If not I can add it to the invite.

Ines

From: Birchfield, Norman
Sent: Friday, October 16, 2015 9:07 AM
To: Pagan, Ines
Subject: Re: Follow up on chloroprene modeling and additional questions

That sounds good. Could you also add Bob Fegley and Tim Benner, perhaps as a cc? They are also ORD and help us coordinate program support issues.

From: Pagan, Ines
Sent: Friday, October 16, 2015 9:03 AM
To: Birchfield, Norman
Cc: Woodall, George; Davis, Allen; Sams, Reeder; Flowers, Lynn
Subject: RE: Follow up on chloroprene modeling and additional questions

I will sent something up and include all in this email.

From: Birchfield, Norman
Sent: Friday, October 16, 2015 8:54 AM
To: Pagan, Ines
Cc: Woodall, George; Davis, Allen; Sams, Reeder; Flowers, Lynn
Subject: Re: Follow up on chloroprene modeling and additional questions

Hi Ines - That sounds good to me. Do you want to schedule something? I've added

Lynn and Reeder Sams to the email list as well although I'm not sure if they feel that they should participate.

From: Pagan, Ines
Sent: Friday, October 16, 2015 8:20 AM
To: Birchfield, Norman
Cc: Woodall, George; Davis, Allen
Subject: FW: Follow up on chloroprene modeling and additional questions

Please read the message below, I think we should meet as soon as possible to have a unified front on this issue.

Ines Pagan

DVM, Ph.D.

Toxicologist

Air Toxics Assessments Group

Office of Air Quality Planning and Standards

Health and Environmental Impacts Division

Phone: (919) 541-5469

Fax: (919) 541-0840

109 TW Alexander Dr.

Mailcode C539-02

Durham, NC 27711

From: Rimer, Kelly
Sent: Friday, October 16, 2015 6:10 AM
To: Pagan, Ines
Subject: Fwd: Follow up on chloroprene modeling and additional questions

Ines,

Here is an email from Patrick Walsh. Let's bring in the IRIS folks on this and make it a priority to follow up with Patrick.

Thanks

Kelly Rimer

Leader, Air Toxics Assessment Group

US EPA

Office of Air Quality Planning and Standards

109 TW Alexander Drive

RTP. NC 27709

Begin forwarded message:

From: <PATRICK.A.WALSH@dupont.com>
Date: October 15, 2015 at 6:27:32 PM EDT
To: <Kelly.Petersen@LA.GOV>, <Doris.B.Grego@dupont.com>, <James.B.Allen@dupont.com>, <Carlos.F.Saldana@dupont.com>, <Palma.Ted@epa.gov>, <Morris.Mark@epa.gov>, <Casso.Ruben@epa.gov>, <Rimer.Kelly@epa.gov>, <Strum.Madeleine@epa.gov>
Subject: RE: Follow up on chloroprene modeling and additional questions

All,

I have reviewed all the appropriate information and my position hasn´t changed. I´m worried that EPA is going down the wrong path. Let me explain my thinking to you:

My problem is that the data as presented by EPA with regard to NATA are presented as "cancer risk":

Facility ID	FIPS Code	Tribal Param	Pollutant	Risk Value (cancer risk reported in a million)	Facility Emissions (tpy)	Facility State Name	County Comm Name
80266	22095	Cancer risk	Chloroprene	16.04	30.0775	E I DuPont de Nemours & Co - Pontchartrain Site	LA St. John the Baptist

(Taken from email from Madeleine Strum to Kelly Petersen, 6/24/15)

That would read to most people that chloroprene is a known, proven human carcinogen. But it hasn´t been proven, or even generally accepted, and EPA´s own toxicology data states such.

The IRIS database for chloroprene reads similarly to the IARC monograph:

"Under the Guidelines for Carcinogen Risk Assessment (U.S. EPA, 2005), there is evidence that chloroprene is ´likely to be carcinogenic to humans´"

Even the IRIS group will not explicitly state that chloroprene is a KNOWN human carcinogen. The entire series of documents discusses chloroprene´s carcinogenicity in mice and rats **only**. While they can be used as models for human physiology, mice and rats are NOT human, and there are numerous examples of materials that are spectacularly toxic to non-human animals but have little or no effect on humans (chocolate springs to mind). Therefore, it is, in my opinion, an irresponsibly large leap to present the chloroprene release data as definitely carcinogenic to humans by presenting it as "increased cancer risk".

In addition, the epidemiological data does not comport with the model at all. The following table describes actual cancer rates for St. John Parish for the most recent 4-year period for

which data is available:

Rank	County	Annual Incidence Rate(†) over rate period - cases per 100,000	Lower 95% Confidence Interval	Upper 95% Confidence Interval	Average Annual Count over rate period	Rate Period	Recent Trend	Recent 5-Year Trend (‡) in Incidence Rates	Lower 95% Confidence Interval	Upper 95% Confidence Interva
53	St. John the Baptist Parish(7,9)	460.8	432.3	490.7	209	2008-2012	stable	-2.2	-9.4	5.6

(Data from http://statecancerprofiles.cancer.gov/incidencerates/index.php?stateFIPS=22&cancer=001&race=00&sex=0&

Given the following:

1. 50+ year history making chloroprene in St. John Parish

2. 20-30 year latency period for most cancers

According to the risk factors EPA attributes to our chloroprene emissions, St. John Parish should have the highest cancer rate in the state. This should be especially true given that our history of emitting chloroprene is much longer than the typical latency for cancer. But in actuality, St. John is in the **lowest quartile** of measured cancer rates in the state (#53 out of 66 parishes) and the rate of cancer is decreasing according to the 5-year trend. Thus, the model has a serious flaw as it doesn´t come close to reflecting real, published cancer rate data.

The above, taken together, indicate that EPA is planning to publish misleading data in an inflammatory way. Therefore, it would be irresponsible to publish it. I strongly urge EPA to reconsider its present course.

Patrick A. Walsh, CIH

E.I. DuPont De Nemours and Company

Safety, Health, Environmental, and PSM Manager

DuPont Performance Polymers Pontchartrain Works

LaPlace, LA 70068

(985) 536-5731 Work

Ex. 6 - Personal Privacy Mobile

Patrick.A.Walsh@dupont.com

-----Original Appointment-----
From: Kelly Petersen [mailto:Kelly.Petersen@LA.GOV]
Sent: Tuesday, October 06, 2015 10:09 AM
To: Kelly Petersen; GREGO, DORIS B; ALLEN, JAMES B; SALDANA, CARLOS F; Palma, Ted; Morris, Mark; Casso, Ruben; 'Rimer, Kelly'; Strum, Madeleine; WALSH, PATRICK A.
Subject: Follow up on chloroprene modeling and additional questions
When: Tuesday, October 06, 2015 11:00 AM-12:00 PM (UTC-06:00) Central Time (US & Canada).
Where: `DEQ/Room 919 - OMF Conference

Please join a conference call at 11am central time on Tuesday, October 6th. The call in information is below.

Meeting Number: Ex. 6 - Personal Privacy

To join the conference call:

Ex. 6 - Personal Privacy

Thanks, Kelly Petersen

To: Rimer, Kelly[Rimer.Kelly@epa.gov]
From: Pagan, Ines
Sent: Tue 10/13/2015 8:58:01 PM
Subject: Some points on chloroprene
Chloroprene_Dupont.docx

Let me know if you want me to be present since I can elaborate on more detail on some points.

Ines Pagan

DVM, Ph.D.

Toxicologist

Air Toxics Assessments Group

Office of Air Quality Planning and Standards

Health and Environmental Impacts Division

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To: Sasser, Erika[Sasser.Erika@epa.gov]; Scavo, Kimber[Scavo.Kimber@epa.gov]; Palma, Ted[Palma.Ted@epa.gov]; Smith, Darcie[Smith.Darcie@epa.gov]; Lassiter, Penny[Lassiter.Penny@epa.gov]; Scheffe, Rich[Scheffe.Rich@epa.gov]; Strum, Madeleine[Strum.Madeleine@epa.gov]
From: Rimer, Kelly
Sent: Thur 12/3/2015 8:26:58 PM
Subject: NATA pager Administrator 12 3 15.docx
NATA pager Administrator 12 3 15.docx

This is what we sent up to Pete for the Administrator.

Thanks, all, for your quick work on this!

Kelly

To: Palma, Ted[Palma.Ted@epa.gov]
From: Smith, Darcie
Sent: Thur 7/30/2015 3:46:20 PM
Subject: NATA facility

Hi Ted –

Ex. 6 - Personal Privacy

He said you were having trouble with a facility emitting chloroprene, in LA. I think it is a Polymers and Resins I – Neoprene facility. We modeled it in P&R I RTR, but there was not a chloroprene URE at the time so it didn't show up with high cancer risk, although it did have lots of emissions. Anyway, just an FYI.

Darcie

Darcie Smith

U.S. EPA/OAQPS/HEID/ATAG

Mail Drop C539-02

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